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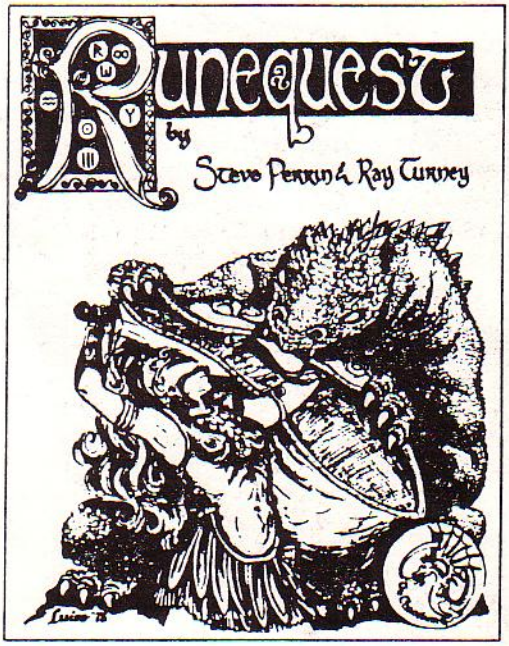

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In This Issue

First (as promised last issue) – the game. KUNG FU 2100 starts on page 10. Play it – then let us know what you think. If you want more games in TSG, we'll try to oblige.

Another feature this issue is the Index to Game Articles. We're constantly getting questions about "When did such-and-so article run?" or "Have you had any articles on thus-and-such a game, and when were they?" This ought to answer the questions. If the response we get is favorable, we'll probably update it every six months or so. Eventually (when the early issues of TSG are reprinted) we could go back and include articles from issues 1 through 14.

No fiction this time; the game squeezed it out. Wait until next issue. We've got a good one coming up.

We've also got an ORIGINS '80 report – probably the first one you'll read. Turn the page to "Where We're Going." This month it tells about where we went, and what we saw there. It was a pretty good convention, everything considered, and we've compiled a listing of who won what and who's announcing which new games.

THE SPACE GAMER

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Where We're Going

This has been a hectic couple of weeks. I'm not sure I can write a "Where We're Going" at all. "How We Almost Made It to Where We Are" would be more like it.

But the issue did make it out – unless you're holding a figment of your imagination. The big feature is *KUNG FU 2100.* We're very pleased with it; play it and see what *you* think. There's still a lot of debate around here about which side really has the advantage. It may be that (wonder of wonders) it's a truly balanced game. But I DO want to get opinions and comments about it – because it's very likely that the game will be published separately, in the $3 to $5 price range, before the year's over.

Other than that . . . Next issue is the big computer issue. The one after that features *Traveller.* After that . . . who knows? Write and let me know what you want to see.

Where We Went

Forrest and I just got back from Origins. (He's on vacation at the moment, so I have to write the whole column.) The way the deadlines worked out, there's just barely time to write up a few notes before the magazine goes to press. So . . . TSG gets (maybe) the first Origins report in the country.

Awards (if you haven't heard): The Guild Select Awards went to *Bloodtree Rebellion* (Lynn Willis, GDW); *Double Star* (Marc Miller, GDW); *Korsun Pocket* (Jack Grady, Peoples War Games); *Road to the Rhine* (Frank Chadwick, GDW); and *White Death* (Frank Chadwick, GDW). Dave Isby was inducted into the Hall of Fame.

H.G. Wells awards for RPG and Miniatures: Best Fantasy/SF figure series was Ral Partha's *Collectables.* Best Vehicular Model series was Martian Metals' *OGRE* line. Best Miniatures Rules: GDW's *System 7 Napoleonics* again. Best Role-Playing Rules: SPI's *Commando.* Best Role-Playing Adventure: *The Kinunir* by GDW. Best Professional Magazine Covering Miniatures: *Courier.* Best Magazine Covering Role-Playing: *Journal of the Travellers' Aid Society.* Best All-Time 20th Century Naval Rules: *General Quarters.* Best All-Time Ancient & Medieval Rules: FGU's *Chivalry & Sorcery.*

The Charles Roberts Awards for games published in 1979: Best Pre-20th Century Game: OSG's *Napoleon at Leipzig.* Best 20th Century Game: SPI's *Cityfight.* Best Fantasy or Science Fiction Game: SPI's *The Creature that Ate Sheboygan.* Best Initial Release by a New Company: Yaquinto's *Ironclads.* Best Professional Magazine Covering Boardgaming: *Fire & Movement.* Best Amateur Magazine covering the hobby in general: *Perfidious Albion.*

(TSG was nominated for "Best Professional Magazine" for both the H.G. Wells and the Charlies – but didn't take it. Wait until next year!)

Next year's convention: Origins '81 will be in San Francisco. Origins '82 will be in Baltimore.

News, rumors, releases, etc:

Operational Studies Group is planning a Ninja game for August release.

Fantasy Games Unlimited is about to introduce a new RPG called *Land of the Rising Sun.* Designed by Lee Gold, it will be compatible with C&S. Also being displayed were box mock-ups for three (apparently) s-f games. Titles were *Space Opers, Diadem, Gateworld.*

Dimension Six has released *The Nine Doctrines of Darkness,* a RPG adventure, and *The Compleat Fantasist,* a guide for playing characters from various RPG systems in each others' games.

Phoenix Games is planning *Aftermath,* an after-the-bomb RPG, for August release.

Yaquinto has released *Shooting Stars,* a game of fighter combat in the near future. Sub-orbital dogfights, etc. It sells for $16.

GDW released *Azhanti High Lightning,* a large boxed *Traveller* game, and *Bright Face/Mithril,* a *Traveller* double adventure. Look for reviews here shortly – probably in issue 32.

The Game Designers Guild is still looking for members. This was my first contact with the Guild, other than reading their very-informative newsletters. At the "business meeting," nothing of any import happened, though it happened rather noisily. Quite a bit of business got transacted at the beer-bust afterward, though. I expect I'll renew my membership.

SPI is starting two more new publications. "Richard Berg's Review of Games" looks like somebody else has thought of capsule reviews. "FYEO" (For Your Eyes Only) is based on the feature of the same name in S&T – a compilation of military hardware/(etc.) news from the worlds' armies.

Simon and Shuster has released "The Complete Book of Wargames," which they call "the first and only consumer guide to wargames." It sells for $8.95.

Games Workshop in Great Britain is releasing four bookcase games: *Apocalypse* (formerly *Warlord*), *Doctor Who* (based on the series of novels), *Valley of the Four Winds* (based on the story from *White Dwarf*), and *Warlock.*

Game Master

Postscript: The reason "Game Master" isn't in this issue is simple. No questions. (Actually, we did get a few, but they were passed on to publishers and no replies have come in.) If you've got a question, send it in. It's not like we're overstocked at the moment.

–Steve Jackson

Next Issue

Computers! TSG looks at the publishers of game software – and reviews a big crop of new home computer games.
Featured review: SPI's new role-playing game system, DRAGONQUEST.
Company report: Yaquinto.
Plus Deus ex Machina, Wargame Design, and all the other regular features.

And coming with issue 32: TRAVELLER reviews, ship design contest results, and more . . .

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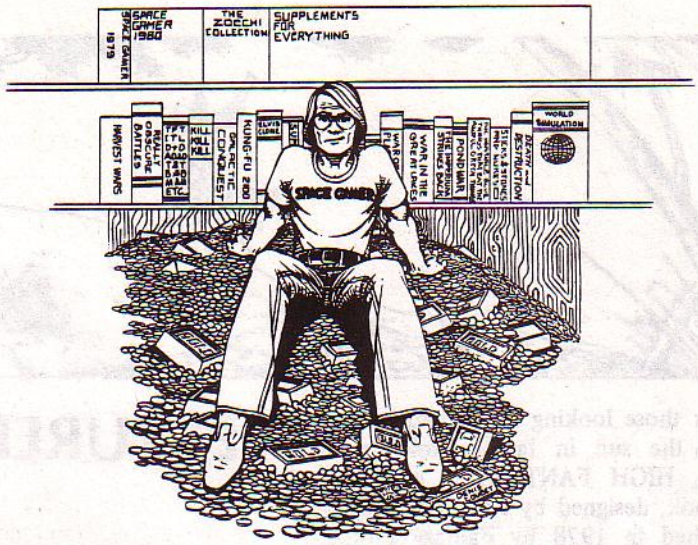

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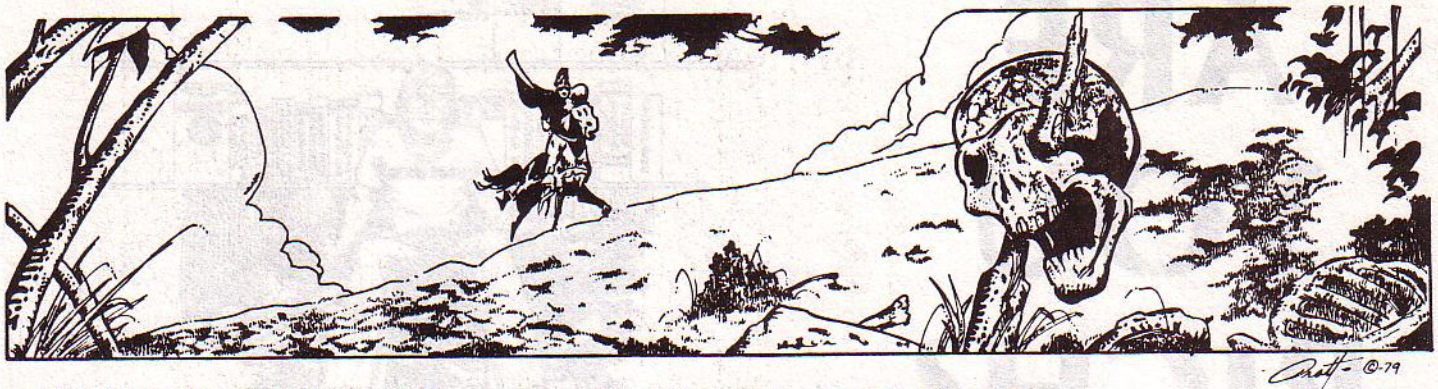

FEATURED REVIEW:

High Fantasy

by Ronald Pehr

For those looking for something new under the sun in fantasy role-playing games, HIGH FANTASY is a 48-page rulebook, designed by Jeffrey C. Dillow, published in 1978 by Fantasy Productions Inc., for $6.00. It is billed as "the ultimate adventure game" and "the ultimate in role playing games." Those who buy it on that basis . . . may I show you this bridge I've got for sale? HIGH FANTASY has some unique ideas, but just like the original *Dungeons & Dragons* it isn't going to be much fun unless you ad lib to fill in around holes in the rules, have someone explain how to play, and have some familiarity with gaming. Unlike the original D&D, this game doesn't provide enough fun to hold your interest long enough to get past the discrepancies.

HIGH FANTASY is the most quantified, abstract role-playing game I've seen. In its attempt to pack substance into 48 pages it loses the rich flavor of *The Fantasy Trip* – whose simple rules allow numerous ideas and options, *Runequest* – with its carefully designed background world and realistic combat, *Chivalry & Sorcery* – with complicated rules that offer intense character identification due to many avenues of endeavor and historical accuracy, and *Dungeons & Dragons* – with plethora of charts and tables and total submergence in the character role. HIGH FANTASY offers a simple, workable game system with a very minimum of random dice rolling, but the taste is so dry it appears to be all dice and no game.

Some of this may be due to what the game designer undoubtedly considers a virtue. An entire game is compacted into 48 pages for six dollars. Each of the other games above has many more pages and cost more money. The designer of HIGH FANTASY may have been trying to give the consumer the maximum game in the minimum space for the cheapest price, but he doesn't quite pull it off.

There is apparently an unwritten rule of fantasy role-playing game design: Either characters proceed through fixed skill levels which define their abilities, but are modified by lots of input from pre-rolled, unchangeable, basic characteristics (e.g. Strength, charisma, etc.); or the basic characteristics and/or skills define the character abilities and it is these basic characteristics/skills which increase rather than arbitrary skill levels. *Dungeons & Dragons, Chivalry & Sorcery, Bunnies & Burrows* are examples of the first type of game. *The Fantasy Trip, Boot Hill,* and *Tunnels & Trolls* typify the other type. HIGH FANTASY seems betwixt and between. The result is that players do not identify with their characters as they do in these other games.

There are only four rolled characteristics, yet two of them – strength and coordination – you never think about again once you've figured them into encumbrance and combat probabilities. Now, maybe not having to worry about six or more basic characteristics, plus the number you need for a character to perform each variety of feats, allows the game to be more fluid, with the minimum dice rolling allowing maximum role-playing. In this game it doesn't happen. Reduced to an Offensive Probability to see if he hit in combat, a Defensive Probability which is subtracted from an attacker's Offensive Probability to avoid a hit, and Innate Ability for non-combat feats, the HIGH FANTASY character becomes a mere equation, abstract numbers that the players can't identify with. Even weapons and armor, which should be part of the sense of adventure, become merely part of character generation. You don't don mail and draw sword, rather you think "hmmm, +20 defense, 400 coin-weight encumbrance, let me look at the chart to see if that lowers quickness – ah yes a sword in the hand alters quickness 2 and puts me 2 over on the combat table."

Similarly, because everything is abstract, combat is handled in only 2½ pages. You can play duels out using these rules and they give results as useful, playable, and as realistic as D&D. But the excitement isn't there, the flavor of combat isn't there, and there are times the referee must make some liberal interpretations of the rules.

Those of us who do a lot of refereeing are used to that last. But that doesn't justify having to do it. A game is judged on what provides, not on what a good referee can make it provide. HIGH FANTASY combat simply has too many loose ends: reach of a weapon is mentioned in the weapon selection table, yet there are no instructions for how it affects combat; breakage of weapons is said to be an optional rule, yet beyond a number in the weapons table (percentage chance each turn?) there are no rules for it. It is suggested that a character can't melee unless he previously drew a weapon, but can he drop one and draw another in one turn or must he suffer a turn of melee after dropping the first?

Magic is described a little more fully but still too perfunctorily. There is an

interesting blend of new spells available for each magic plane plus an increase in the effect of lower plane spells used at a higher plane. Spells always preceed melee and nobody except a wizard can resist them – a unique feature to this game. If the wizard can throw the spell, it works on the victim 100%. Yet, there are too many loose ends here, too: it isn't stated how wizards acquire spells; it isn't stated how wizards of less than fifth plane acquire the book which is necessary for most spellcasting; creation of magical artifacts isn't mentioned beyond saying they exist and should have an assigned innate ability; and it isn't stated if wizards may bear arms. Like the combat system, the magic system is fast, playable, and has some unique, interesting features, but has so many loose ends thay you feel like just chucking it and playing a competing fantasy game.

What I found to be absolutely the worst feature of this game was the monster descriptions. These seem to be straight out of D&D, a couple having different spelling to disguise that fact, yet the one or two line descriptions are so inadequate that if you'd never seen D&D you might not even know what they're all supposed to be. Truly unforgiveable are the one-liner descriptions of elves, dwarves, and hobbits on the last page under "Optional Rules." Elves an option? In a fantasy game?

Every game has some good features. HIGH FANTASY is no exception. The basic idea of using only percentages for attack, defense, and miscellaneous tasks – as in *Runequest* – gives a playable system which doesn't require too much use of charts once you've got a character set up. The combat table is extremely clever and gives the usefulness of a table without the cumbersomeness of those in D&D.

HIGH FANTASY can work. If a referee is willing to put the time into developing a background world, if players can identify with characters who exist only as Offense, Defense, and Innate Ability, and if people do what they did with the original D&D and put in some necessary reforging on the rules, HIGH FANTASY can be a good game. If the designer would double the size (and price) to give us more background and explain away some of the rules glitches, HIGH FANTASY could be very good. If you like simple abstract systems with which you can tinker to your heart's content, HIGH FANTASY has something to offer. If you need more than that you might want to wait for HIGH FANTASY II, or stick with the games you already play.

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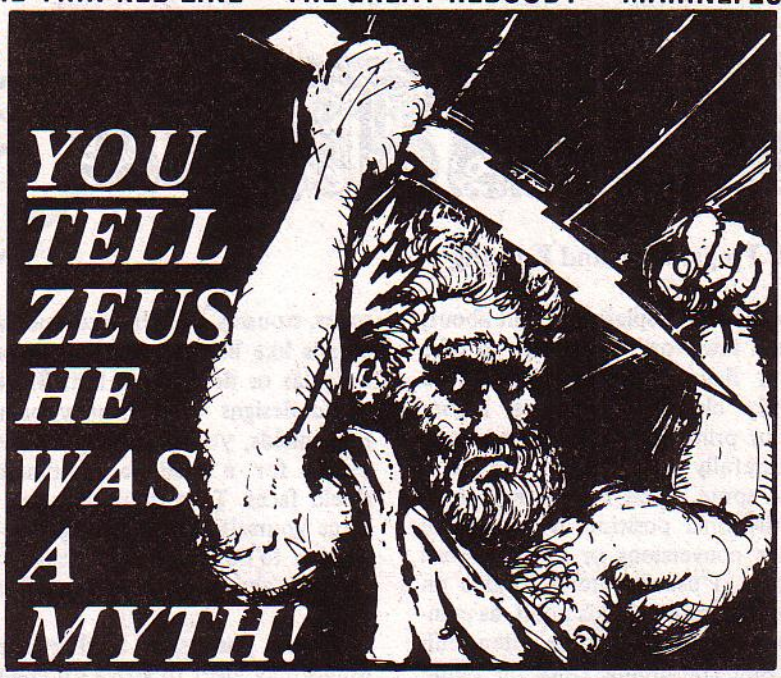

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Painting Fantasy Miniatures

By Kevin Hendryx

Part II: Preparation and Painting

Before you start splashing paint about, there are a few worthwhile steps to take with your figures. Now is the time to thoroughtly clean your figures, before painting or priming. With files and small knives, carefully trim away all the metal flash and sprue. Bend the figures' arms, etc. to the final position desired. Make any other conversions or modifications at this time. I usually prefer to glue on shields and weapons at this point, as painting these items separately is often tedious and time-consuming. Once the figure is cleaned and assembled, and any gluing has had time to dry, it is ready to be primed. *All* miniature figures should be primed. It never fails to facilitate *any* painting job, and with some water-based flats, it's a virtual imperative in order to make the paint adhere well to the painting surface. Any leading brand metal primer should suffice. Allow primed figures to set overnight before painting.

It is customary to paint miniatures in small groups, from just three or four up to a dozen. It works best to stick to one basic type of figure, as in six Hobgoblins or eight Wood Elves. This reduces the time it will take to finish painting the group, as they will all require roughly the same colors of paint. It is common practice to go through the group painting all the flesh, say, or all the red at once, for each figure, which saves you from cleaning your brush several times for the same color. If you choose to fix your figures to a temporary painting stand, or even to mount them before painting, now is the time to take care of that.

Most miniaturists paint the skin on their figures first. Then they try to paint the figure by layers, beginning with the skin and then proceeding to the layer of clothing or armor worn immediately over that. Next, paint the next layer of clothing over the first, and so on, so that in effect you are painting those items closest to the skin first, in the same order as the figure would dress himself if it were living. You will find this will eliminate much of the chance of smearing paint over something that has already been painted. Also try to paint the largest items first, i.e. coats of armor, tunics, robes, trousers, and the like, and save tiny details like belts, buttons, weapons, and insignias or designs for last. Since many shield designs were actually painted on real shields, you may wish to use glossy paints for a realistic reproduction of shield faces. Take your time and do not force yourself to rush through a job – it's quicker to do it right once that to have to go back and have to do something over again.

Those possessing a flair for these things may elect to strive for greater realism by shadowing and highlighting the paint jobs on his figures. Shadowing is usually accomplished by "washing" a particular area with a light coat of paint thinned by either thinner or water. A darker shade than the original is used. The diluted paint will tend to collect in the recesses and creases in the metal when dry, will give a dark shadow effect making folds in clothing or the deep areas of the face (eyes, mouth, around the nose, and neck) more prominent and giving added life to the figure. Metal armor, especially chain mail, is best shaded with flat black. The skin, for humans, is done with a darker flesh tone or a red-brown, and other colors can be shaded by using darker tones or mixing them with black or brown.

Highlighting is a trickier art, and involves applying a lighter shade of color to high prominences in clothing or the skin, such as along the top edge of a fold in a tunic or the bridge of the nose, the cheekbones, and the chin on the face. It is best to do this by brushing on a very small amount of the lighter color, then quickly wiping the area with a cloth or rag (Q-Tips also work fine). This will blend the lighter shade with the rest of the colors, so that the distinction between shades is not so noticeable, but leaves just enough to bring out the extra lightness of the feature. Highlighting must be done sparingly and subtly to be effective, and is not done to the same extent shadowing is.

The face of the figure is often the key to realism in wargame miniatures. It should be shadowed if at all possible, though not much highlighting can be done on 25mm figures. The eyes should be painted in brown with a very fine brush, or they will be too big for the face. Make eyebrows the same color as the figure's hair. Mouths can either be left with shadowing or emphasized with a thin brown line. On larger figures, giants for example, or 54mm miniatures, the eyes can be done with greater precision. After shadowing and highlighting the whole of the face, paint in the eyes with white. Then outline the lid with a narrow, dark brown line. Add two irises of the chosen color, being careful to make them neither too big nor too small, and position them correctly so the figure is not cross-eyed or gazing askew with eyes that are focused in different directions.

Brush care is of continuing importance during your painting. Always use the proper sized brush for your particular needs. Keep a good point on them, and cut off or pull out uneven or ragged bristles. Reshape your brush after every cleaning so the bristles will stay together. Remember your skill at painting, no matter how masterful, is no greater than the sum of the parts.

You should also pamper and baby your paints. Since they seem to rise in price every year or so, each bottle represents a tidy investment, so make it stretch. Always shake your paint container well before opening, to mix the paint, and also shake it after you are finished before you put it away. If it has been sitting open for a while, the top quarter of the bottle will be drying as you work, and if you put it back like that, the next time you open it the top of the paint may have completely dried itself over. Shaking afterwards remixes the paint and helps keep the entire container fresh.

Try to exercise some taste in color selection, if only for the sake of others who have to look at your collection. It can be extremely trying to say complimentary things about a dwarf clad in a purple and orange tunic, pea-green boots, and an apricot cloak. Try to paint the clothing, accoutrements, etc. as naturally and realistically as possible. Check out sources for suggested painting information and hints, such as the *D&D Monster Manual*. Or go straight to the original leg-

end or story that describes the various beasties. For instance, if you wanted to paint a Manticore as nature intended it, you could dig up E. R. Eddison's *The Worm Ouroboros* and read the description in Chapter XII. Other extra details that can give animation and originality to your figures could be such things as mud-colored paint splattered on boots and leggings, rust on the weapons of orcs, bloodstains or wounds on figures, etc.

Even with all this, there is still no need to feel that fantasy miniatures need look standardized and uniform. There is no Funcken book in print yet on the War of the Ring, nor any such release in the Osprey Men-At-Arms Series. In fact, fantasy figures leave more to the imagination and creativity of the painter than any other field of miniatures. This is their greatest advantage, and is why it is so much fun and relaxing to paint elves and trolls and wizards and heroes after struggling for historical perfection with your French hussars. There is also plenty of room within the boundaries of fantasy for fun and games and even plain silliness, if the mood strikes. Fantasy gaming takes on a whole new perspective when one's orcs have swastikas and SS runes on their shields, kobolds have lemon-yellow skins and carry Communist Chinese flags, a hobgoblin chief's shield reads "Money Talks," and a paladin known as Sir Walter of Disney wears Mickey Mouse on his armorial trappings.

Once your figures have been painted and are completely dry, it is a good idea to give them a coat of protective laquer. I reccommend Krylon Crystal Clear spray from personal experience. It gives a hard, clear finish that will preserve your gorgeous bugbears and druids from life's hard knocks. It will also brighten up your flat paints, which sometimes look overly dull while you are working with them. It may comfort you to know that Krylon is not harmful to the ozone layer, if you're the sort who worries about such things.

After the lacquer has dried, you may mount your figures, if you plan on mounting them at all and have not already done so. Heavy matte board available at any good art supply store is perfect for such a purpose, being tough, durable, and far easier to work with than balsa wood. One $3 sheet of matte board will be sufficient to mount several large armies. The stand of mounted figures may be painted, if desired, or may be sand-based for greater realism. To do this will require a wide bowl of ordinary playbox sand, (*not* beach sand, which is too fine). You can buy this coarse-grained variety at most hardware or lumber stores, though it is more entertaining to obtain it by night from a construction site or a golf course. Take your stand of figures and thoroughly coat the base (metal bases and matte board alike) with Elmer's Glue. Then dip the bases in the sand. Make sure that sand completely covers the surface of the stand. Dust off the excess sand with a dry paintbrush, and *viola* – there should be remaining a nice coat of sand on the stand concealing the matte board and the metal figure bases. Do not let the sand become glued too far up the feet of your figures, however. You can leave the base as it is, or, giving it about a half a day to dry, you can paint it in earth shades or to resemble grass. To get the latter effect, first paint the sand base entirely in flat, dark green. Let dry. Then, using a very dry brush with only a small amount of paint, brush a flat yellow lightly over the green. This will produce a very pleasing surface of mottled green and yellow that closely resembles a grassy meadow. Other touches that can be attached to the sand base include small rocks, twigs, moss, or mock shrubbery.

Once a taste for it is aquired, fantasy miniatures painting becomes dangerously addictive in a very short time. Not only will you find it rewarding in its own right, but the results will brighten any role-playing or war game.

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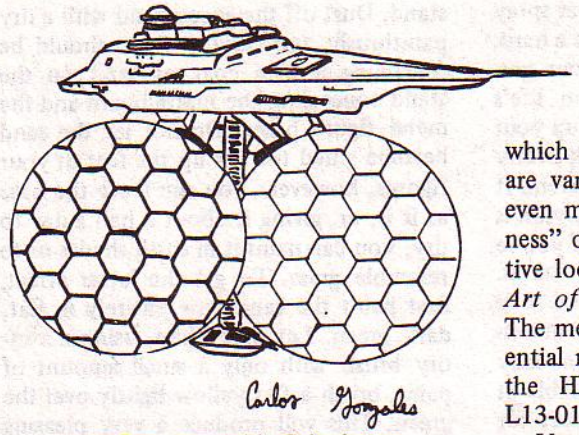


By BRUCE WEBSTER

Using Programmable Calculators
(Part I)

Introduction

I wrote my first game-related program over three years ago on a newly-purchased HP-67. It was a game-playing aid for SPI's *StarForce* and included my first algorithm for determining distances between hexes. Since then, I have probably written over twenty "game aid" programs on my calculator and have developed all of my hex map algorithms on it as well. Because of this and also because of specific requests by readers, I am devoting the next few columns to using programmable calculators in gaming. Those of you who "only" have computers, despair not! Most of the information to be presented can be used in regular computer programs as well.

A few assumptions are in order before we start. We will be working on an imaginary calculator that has (at least) ten registers (numbered 0 through 9), one of which (register 0) is an index register. These registers can hold numbers with 10 (ten) decimal digits and a two-digit exponent. The calculator has functions INT, FRAC, R to P, and P to R, as well as other standard functions (square root, etc.). And even though I'm a staunch RPN fan, I will not assume that the calculator uses either RPN or algebraic notation.

Pseudo Random Number Generation

Almost every game requires some method of generation of random numbers, usually by rolling dice. A calculator can be used to generate a *pseudo-random sequence* of numbers by fairly simple methods and can thus simulate rolling dice. This is a sequence of numbers which will tend to be evenly distributed over a given range (such as 1 through 6) and which follow no apparent pattern. There are various methods for doing this and even more ways of testing the "randomness" of such techniques. (For an exhaustive look at this subject, see Knuth, *The Art of Computer Programming*, vol. 2.) The method I give here is a linear congruential method and comes straight out of the HP-67 Standard Pac Manual, pp. L13-01 to L13-04.

You start with a seed that consists of a seven-digit fraction (such as .5284163) and store it in a given register, such as R9. Each time you wish to compute a random integer i between j and k (inclusive), go through the following steps:

```
seed := R9
seed := FRAC(997*seed)
R9   := seed
i    := INT(seed*m)+j where m =
        (k+1) - j.
```

Note that if j = 1 then i :=INT(seed*k)+1.

You can see that you can "roll" an n-sided die by letting j := 1 and k := n. This means that you can not only simulate 6- sided dice, *et cetera*, but you can also create 7-sided dice, 23-sided dice, and so on. One word of caution though – it has been my experience that in games requiring a lot of dice-rolling (particularly role-playing games), it is usually faster to roll the actual dice than to replace them with a calculator.

Calculating Attack Odds

If you are using your calculator as a "black box" to do combat resolution, you are going to need a routine that will accept the attacking and defending combat strengths and produce a value indicating the "odds": 2-1, 1-3, or whatever. This value will probably be used by your calculator along with a pseudo-die roll to look up a result in a combat results table (CRT) stored in the calculator's registers (more on this later). The technique given below assumes the following concerning the odds calculation:

(1) the odds are rounded down in favor of the defender;

(2) there are some upper and lower limits to the acceptable odds, i.e., attacks are not allowed below a certain ratio or destruction of the defender is automatic above a certain ratio.

Provision is made for modifying the algorithm to allow 3-2 or 2-3 odds.

Let's assume that we have a CRT with n columns and the 1-1 odds column is the kth column counting from the left. The following method will produce a value, IP, between 1 and n (inclusive), which can then be used as desired:

```
if attack greater than or equal to
defend then
    P := attack/defend
  if no 3-2 odds column then
    IP := INT(P) + (k - 1)
  if a 3-2 odds column then
    if P less than 1.5 then IP := k
    if P less than 2.0 and P greater
    than or equal to 1.5 then
    IP := k+1
    if P greater than or equal to
    2.0 then IP := INT(P) + k
  if IP greater than n then handle
  accordingly
if attack less than defend then
    P := defend/attack
    if FRAC(P) = 0 then P := P+1
  if no 2-3 odds column then
    IP := k - INT(P)
  if a 2-3 odds column then
    if P greater than 1.0 and P
    less than or equal to 1.5
    then IP := k-1
    if P = 1.0 or P between 2.0
    and 1.5 (exclusive) then
    IP := k-[INT(P)+1]
  if IP less than 1 then handle
  accordingly
```

Table Look-Up

If you have enough registers to spare in your calculator, you can put an entire CRT or other game-related table in them. This table can then be accessed by your program and the obtained value either used or displayed appropriately. Let's take an example.

	1-2	1-1	2-1	3-1	4-1	5-1
1	NE	NE	NE	D	D	D
2	NE	NE	NE	D	D	X
3	NE	NE	D	D	X	X
4	NE	D	D	X	X	X
5	D	D	X	X	X	X
6	D	X	X	X	X	X

Figure 1 – CRT Table

Our first step is to decide the format of the table in the registers. First, we have to pick numbers to replace the codes; here we will use NE = 0, D = 1, and X = 2. Second, we have to decide how to index the table. For this example, we will

index by die roll, so that each row will go in a separate register; if we had decided to index by odds, each column would have gone in a separate register. Finally, we encode the table using digits to the right of the decimal point and store them in our chosen registers.

R1 = .000111
R2 = .000112
R3 = .001122
R4 = .011222
R5 = .112222
R6 = .122222

To use the table we first compute the two indices needed – in this case, an odds value, IP, (derived from user input and calculated as shown above) and a 6-sided die roll (from our PRNG). Since we are using registers 1-6 for our table, we can store the die roll unmodified in the index register; if we were using a different range of registers, say 3-8, we would have to add a displacement (2 in this case) to the die roll before storing it. We recall the appropriate row in the table using the index register and multiplying it by 10 raised to the (IP - 1) power. We FRACtion the result, multiply it again by 10, and then take the INTeger portion. We now have our single digit result and can use it as needed.

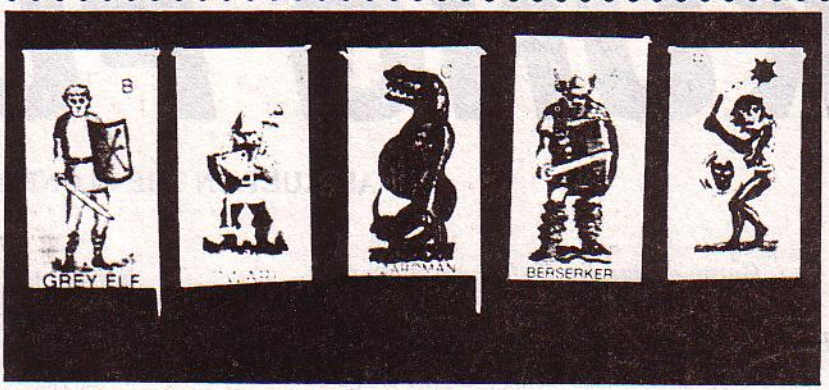
```
IP = 4, die = 3
R(die) = .001122
value :=   INT[10*FRAC(.001122*10**
             [IP - 1])]
       := INT[10*FRAC(1.122)]
       := 1
```

This method can be both expanded and contracted. Some CRT's will require you to use multi-digit results, which may demand that you spread the row (or column) out over two or more registers and which will also require you to increase the multiplying values to isolate the desired entry. Other CRT's can be compressed within a single register and are indexed by simply recalling that register and multiplying it by 10 raised to the (IP + die roll - 3) power and then proceeding as before. For example:

	1-2	1-1	2-1	3-1	4-1	5-1
1	NE	NE	NE	D	D	D
2	NE	NE	D	D	D	X
3	NE	D	D	D	X	X
4	D	D	D	X	X	X
5	D	D	X	X	X	X
6	D	X	X	X	X	X

R1 = .0011122222

That's all for now – more next month. If you have questions or comments, feel free to write.



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THE ASSAULT ON THE CLONEMASTER

Game design by B. Dennis Sustare

Edited by Steve Jackson and Forrest Johnson
Cover and interior art by Denis Loubet
Playtesters: Elisabeth Barrington, Billy Moore, Judy Myers, Lorin Rivers, David Rogers, John Strohm
Game concept based on a drawing by Mitch O'Connell

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Rising Dream raced down the corridor as his two comrades stayed to delay the pursuit. He burst through the door at the end, to find himself in a large, well-lit enclosure. Glancing about, he saw that he had penetrated to the computer area. A scream came from one of the technicians on the platform above: "A Terminator! Call the guards!"

In several long strides, Dream was across the room. He sprang to the platform in a single great leap. The terrified technicians recoiled, but to no avail, as they fell to three rapid blows from his powerful fists. He then turned to the computer, destroying its memory units as readily as he had dropped the technicians. His Iron Fist ability was more effective than a sledge hammer.

A challenging shout came from below. Rising Dream whirled to see a muscular man, crouched in a fighting stance, with the deadly nunchaku gripped in his left hand. Dream leaped down to face him, shouting, "Cowardly Jelly, prepare to end your existence!"

The CloneMaster's guard attacked first, whirling his weapon toward his foe's head. Dream stepped back before the blow could land, but the Jelly pressed the attack, launching a kick toward his midsection. Rising Dream did not attempt a sidestep; he merely twisted his body slightly as he had been taught to do. The foot slipped harmlessly by. Before the guard could react, Dream kicked upward, breaking the guard's arm and sending the nunchaku whirling away. Ignoring the footsteps behind him, Rising Dream struck once more at the Jelly, smashing his fist into the hated face of this reject from the Society of Thanatos. Dream knew that his antagonist was dead even before the body hit the floor.

A technician was now behind Dream, who swung to face this new assailant. He noted that the armored door on the upper level had swung open. The tall man standing to watch the fight could only be the CloneMaster himself! Returning his attention to the technician, he saw that the man held a small pistol. In that instant, it fired. Although the bullet struck Dream in the chest, he had spent years to training to develop his Mountain Heart. He felt no pain from the wound. With little effort, the Terminator kicked at the technician, who gasped once and fell.

Rising Dream looked up once more. The CloneMaster, now alarmed, was retreating behind the thick metal door. Dream ran forward and leaped to the ledge – too late to keep the door from closing. Controlling his breathing carefully, he concentrated on the strength flowing into his fist. The energy originated from a point in his belly, rose up through his body, and channeled out along his arm. Finally prepared, he visualized a point just beyond the face of the door, and released the energy he had been accumulating. The metal itself yielded against such power. The armored door shrieked in protest as it gave way, fragments of the lock mechanism falling to the floor.

The Terminator was now in the living quarters of the CloneMaster, and he quickly went from room to room, searching for his prey. Several servants attempted to stop him, but he easily swept them aside, not pausing to kill them. He pulled open a door to discover a bedroom, richly decorated with embroidered hangings like nothing he had ever seen. With its fine woods, delicate crystal, and exotic sculptures, the room represented a world Dream had only heard vaguely described. His attention was not on the riches, though, but on the man who cowered beyond the bed.

This was the CloneMaster, the ruler of this fortress, who dominated the poor families living beyond its walls. He began to plead with Rising Dream.

"Do not do this thing, and you can have whatever wealth you wish!" He gestured at the contents of the room. Rising Dream shook his head and advanced.

"You can join my household, become one of my guards! Take your choice of my servants to satisfy your every desire!"

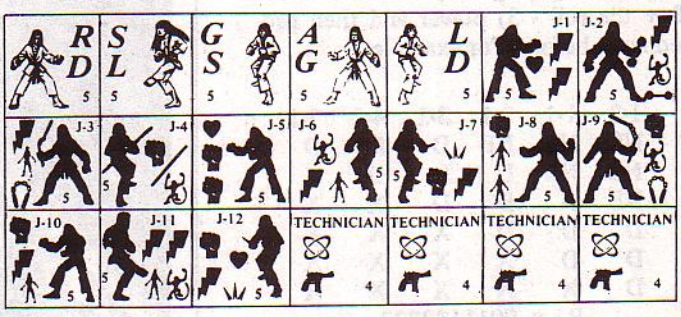
"I am no Jelly," Dream replied, as he continued forward.

"I can make you immortal!", the CloneMaster cried. "You can live forever, safe from disease, safe from accident, safe from old age!"

Rising Dream stood before him now. Softly he spoke. "I am one of the Society of Thanatos, what men call a Terminator. I exist for but one purpose: to see that none can claim immortality." He smashed his Iron Fist into the chest of the CloneMaster, crushing the ribs and breastbone and bursting the heart beneath.

His task was not yet done. Until the clone tanks had been destroyed, the CloneMaster was not truly dead. Rising Dream turned back toward the door, glanced once more at the ornate room, then smiled and left the body on the floor. Red footprints marked the thick white carpet.

–B. Dennis Sustare



Counter Set I

1. HISTORICAL BACKGROUND

The perfection of cloning techniques in the year 2006 caused world-wide social disruption. The expensive and complex cloning procedure required large computers (for programming of clones with the personality and experience of the original), a well-equipped biological laboratory (for initial clone culture) and an elaborate growth chamber (for accelerated development of the clone). Only the wealthiest and most powerful had access to such equipment . . . but those few gained effective immortality for themselves and their loyal followers.

These powerful few (soon to be called CloneMasters) joined to defend their status against the angry masses who felt doomed to mortality. In the early riots, many laboratories and government buildings were put to the torch. Whole cities followed; much of civilization collapsed. Gradually, the surviving CloneMasters restored order – but of a very repressive kind. Technology was reserved for themselves; the populace was forbidden to use engines or machinery. Even metal was eventually outlawed.

By the year 2100, the world was fragmented into individual fiefdoms, each controlled by a CloneMaster from his personal fortress. Within this citadel was all he needed to grow and program his clones – letting him live forever in luxury. Attended by guards, servants, and his computer technicians, snug in his haven, a CloneMaster needed to give little thought to the Dark Ages beyond his walls. Any organized revolt would be quickly dealt with by the CloneMaster's own secret police, or by the armed forces maintained co-operatively by groups of CloneMasters.

But in the mean hovels beyond the walls, a secret cult came into life. Members called it the Society of Thanatos; the common folk called them Terminators. They had but one goal: to end the lives of the CloneMasters. Terminators were trained from childhood to fight with the only weapons left to them: their hands and feet. They reached the human limit in strength, stamina, unarmed combat, and immunity to pain.

A few failed in their training or rebelled against the strict Terminator discipline. Of these, many sought out the CloneMasters to inform on the cult. Such treachery often led to the destruction of a cult cell – but some always survived. The turncoats themselves took service guarding the CloneMasters. The CloneMasters called their kung-fu guards Janizaries. The common folk called them spineless Jellies – but not to their faces.

Kung Fu 2100 is a game of battle between the Terminators and the CloneMaster. One player – the Terminator – seeks to enter the fortress of his foe, to destroy him and all his works. The other player – the CloneMaster – must defend himself until help can arrive. The Terminators are few but powerful. The "Jellies" are weak by comparison – but any one would be a match for many normal men. And they will give their lives for the CloneMaster . . . .

WARNING: This is a game, not a simulation. Serious minded folk read further at their own risk!

2.0 COMPONENTS

All the components are included in this issue of TSG. In order to use them, you will need to have photocopies made. We do NOT encourage you to tear up your magazine. Using white glue or rubber cement, mount the map and counters on thin cardboard and cut them out. You may want to color some of the counters for recognition.

2.1 Mapsheet. The map shows the residence of the CloneMaster. The heavy lines show outer walls; arrows show entry points. Light black lines are interior walls, which cannot be crossed. The walls divide the map into rooms and halls, each of which is named. Certain of the rooms contain vital installations – computers and clone tanks. These are marked with asterisks.

The rooms are separated by soundproof doors. Units may move through these doors freely, and even attack through them, at no penalty. There are also two "armored doors" shown by double lines. One is the front door of the building; the other separates the Overlook and the Upper Main Corridor.

Each room is divided into squares. These squares govern movement. The center of each square is shown by a dot, to control missile fire.

2.2 Symbol Chart. The symbol chart is printed on the mapsheet. It shows the various symbols used on the counters and map.

2.3 Turn Record Track. This is also printed on the mapsheet. Place the "TURN" and "PHASE" counters on the track and move them at the completion of each phase.

2.4 Record Sheets. There are two record sheets – one for each player. The Jelly Record Sheet shows the abilities of Jellies 1 through 12. After the CloneMaster marks off the Jellies he is not using, the sheet is ready for play. The Terminator Record Sheet shows three levels of ability in each of 5 skills – a total of 15 levels. The Terminator player must choose which level of skill each of his men has in each ability, and mark off the sheet accordingly. Once play begins, the players use the record sheets by marking off skills lost due to injury. When combat occurs, place the Tactics counters on the record sheets to keep them from being mixed up.

2.5 Counters. There are several different kinds of counters:

2.51 Turn and Phase Counters. Place these on the Record Track.

2.52 Tactics Counters. There are 5 different kinds of these counters – 30 in all. They are used during combat (see Section 5).

2.53 Destruction Counters. Place one of these on a piece of vital equipment after the Terminators destroy it.

2.54 Door and Equipment Counters. These counters represent extra armored doors and pieces of equipment. Use them to make the game harder for the Terminator player – see Section 7, Optional Rules.

2.55 Counters Representing Humans. There are seven different kinds of "human" counters in this game.

2.551 Terminators. There are five counters representing Terminators. (Most games will use only three.) Each shows only the Terminator's picture and the initials of his name. A Terminator moves 5 squares per movement phase and has two movement phases each turn.

2.552 CloneMaster. There is one counter for the CloneMaster. It carries a picture of a gun, showing that he can fire once per turn. He moves 4 squares per turn.

2.553 Jellies. These are the CloneMaster's guards, trained in kung-fu. However, they are much less skillful than the Terminators. Each Jelly has a J plus a number (J-3 is Jelly number 3). It also has his silhouette and 3 or 4 small symbols indicating which abilities he has. Some Jellies have the same symbol twice; for instance, J-1 has two Lightning Foot symbols, indicating he has two levels of skill in that ability and could therefore kick twice in one turn. Jellies move 5 squares per turn.

2.554 Technicians. A technician is shown by an atom symbol. Technicians have no combat skills and move only 4 squares per turn.

2.555 Armed Technicians. A few of the technicians (the most-trusted) are permitted to carry guns. Their counters are just like regular Technician counters except that they also show a gun, indicating they can fire once per turn. They also move 4 squares per turn. Note that when any armed figure is killed, his gun is lost. The Terminators and Jellies are better off without it, and the other figures don't know how to use it!

2.556 Servants. A servant is shown by the serving tray symbol. Servants have no combat skills and move 3 squares per turn.

2.557 Local Constabulary. These are the "policemen" guarding the outer wall of the CloneMaster's estates. In the advanced game, they will come charging through the front door in answer to the alarm. They are shown by the letters LC, a badge, and a gun. They move 4 squares per turn.

2.6 Combat Results Table. This table (CRT for short) shows the result of each type of attack when met by each possible defense. To use it, cross-reference the attack (horizontal rows) with the defense it meets (vertical columns). This will show the die-roll the attacker must make in order to hit. Some attacks are automatically successful; some defenses will automatically stop certain attacks without a die roll.

3.0 SETUP AND SEQUENCE OF PLAY

3.1 Setup. Before play begins, the players must choose a scenario from Section 6. Follow the setup instructions for the scenario. The Terminator will have to choose what levels of ability his men have and mark that on the record sheet. The CloneMaster will have to pick out his counters and arrange them, face down, on the map. Play then begins with the first movement phase.

3.2 Sequence of Play (Phases). Each turn is composed of seven *phases*, as shown on the Turn Record Track. They are:

TERMINATOR MOVE I. Each Terminator moves up to 5 squares.

COMBAT I. All combats created by this movement are resolved.

TERMINATOR MOVE II. Each Terminator moves up to 5 squares.

CLONEMASTER MOVE. CloneMaster may release new counters (see below). Then each CloneMaster counter *that is now face-up* may move

Untrained attack – successful!

up to its full movement allowance.

COMBAT II. All combats created by this movement are resolved.

RECOVERY. Any injured figure with Mountain Heart ability rolls one die to see whether it "recovers." If a 1 or a 2 is rolled, one level of Mountain Heart is recovered. See Section 5.6.

ADVANCE GAME TURN. Move the TURN marker ahead one turn. It is now time for the first Terminator move of the next turn.

It is important to keep track of what phase it is by moving the phase marker. Otherwise, great confusion may result.

4.0 MOVEMENT

4.1 Terminator Entry. At the beginning of the game, the Terminators may enter the building in any of several ways. It is possible for them all to come in the same way (though this may delay entry for some) or for each to use a different path. Any Terminator may delay his entry for any amount of time, but it is usually best to enter quickly.

4.11 Front Door. If Terminator(s) want to break down the front door, those Terminators may not move during Movement Phase I. During the Combat Phase, all Terminators at the front door may attack it (see Section 5.7). If and when the door is destroyed, any or all of the Terminators present may enter on the *next* Movement Phase. The Entry Corridor square shown by the arrow is the first square of movement for each.

4.12 Out of the Loo! Though the CloneMaster lives in luxury, his plumbing is primitive. Wastes drop directly into large sewer-pipes which lead into a stream. The Terminators may enter the castle by crawling along these pipes (remember, they're *fanatics*) to come bursting out of the facilities. One Terminator per Movement Phase may come out of each lower-level loo. The "Loo" square on the board counts as his first square of movement. It is not possible to enter or leave through Loo 4 or Loo 5.

4.13 Kitchen. Kitchen wastes also drop into the sewers. One or two Terminators may enter each phase through the kitchens. The square shown by the arrow is the first square of movement for each one.

4.2 Release. None of the CloneMaster's counters may move until they are "released." At the beginning of the game, all CloneMaster counters are upside-down. When a counter is released, it is turned right-side-up. Before a counter is released, it cannot move or attack . . . but the Terminator does not know what it is!

A counter may be released in one of two ways:

(a) Terminator movement. When a Terminator enters a room, all counters in that room are instantly released. Turn them right-side-up. The Terminator player may look at them before finishing the movement (if any) of the man that entered the room. He may even choose to move right back out of the room.

(b) CloneMaster choice. At the beginning of the CloneMaster Move each turn, the CloneMaster may activate one Jelly, one Servant, and one Technician (armed or unarmed). He may pick the ones to be activated from wherever he likes. If all the counters of a given type have already been activated, the CloneMaster does NOT get to activate an extra one of another type. If for some reason the CloneMaster wishes to leave some counters unactivated, he may. He never *has* to activate a counter.

4.21 CloneMaster Release. The CloneMaster himself may be activated at *any time* by the CloneMaster player . . . during any phase he wishes. At the moment he is activated he gets a free move of 4 squares (though this may be blocked; see Movement Restrictions, Section 4.4). If the CloneMaster is activated by a Terminator entering his room, he has his choice: he may take his extra move at the instant the Terminator enters, or he may wait until the end of that Terminator Move.

4.22 Units remain released. Once a CloneMaster unit has been released, it stays face-up for the rest of the game. It may never "hide."

4.3 Movement Allowance. Each counter carries a number (the bottom symbol on that counter) showing its movement. This is the number of squares that unit can move each phase. Terminators get two movement phases per turn. CloneMaster units get only one. A unit never *has* to move its full movement allowance. It can move fewer squares, or even stand still. A unit may re-trace its path if there is need.

It costs one movement point to move from one square to an adjacent one. Figures may move north, south, east, or west, but never diagonally.

4.4 Movement Restrictions. Some factors may hinder movement, as follows.

4.41 Armored Doors. If an armored door has not been destroyed, it costs *one extra movement point* to pass through it. A Terminator cannot pass through it at all until it has been destroyed. It is not possible to attack through an intact armored door.

4.42 Crossing the Drop-Off. The Overlook Corridor and the Central Room are separated by a line of dots. This represents a "drop-off" or split-level room. It costs *two extra movement points* to cross this drop-off in either direction – *unless* you are a Jelly or Terminator with an undisabled Monkey Soul ability. In that case, it costs nothing extra. You do *not* have to pick a Monkey Soul combat chit – you just need the ability. (Note: The map doesn't show it, but the Lower Main Corridor is a ramp – that's how the upper and lower levels connect normally. There is also a flight of steps from Overlook to Central.)

4.43 Hostile Martial Artists. It costs *two extra movement points* to enter a square occupied by an *enemy* Jelly or Terminator. It costs nothing to enter a square occupied by any other figure. It costs nothing to enter a square with an enemy if he is unconscious (see COMBAT).

4.5 Obstacles to Movement. It is *impossible* for any unit to cross a wall or to enter a square with a clone growth tank (circle with an asterisk). However, it *is* possible to enter a square with a computer (rectangle with an asterisk) along one wall.

4.6 Stacking. Only one human may occupy each square at the end of any movement phase. It is possible to go *through* other units, either friendly or enemy, if you have enough movement – but you *cannot* stop your movement on another figure. Exception: Any number of unconscious figures may occupy a square; one conscious figure can also be in that square.

4.7 Leaving the Map. CloneMaster units may never leave the map for any reason. Terminators may attempt to leave the map at the end of a game. They may exit by the lower-level loos or the kitchen, but not by the front door (they'd be cut down immediately). One per movement phase may exit by any loo; two per phase may exit through the kitchen. To leave, a Terminator must be in the appropriate entry/exit square and have at least one movement point remaining. Terminators who have exited the map may not re-enter.

4.8 Zones of Control. Those players accustomed to conventional wargames should note that there are NO "zones of control."

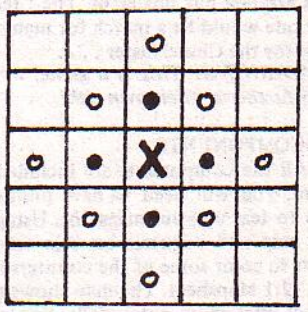
5.0 COMBAT

5.1 When combat occurs. Combat may take place during either of the two Combat Phases. Combat is always voluntary. It would be possible (but unlikely) to have enemy units side-by-side, but have no combat – because neither player felt it would be to his advantage.

All units involved in a combat must have been released. (Terminators, of course, begin the game "released.")

Units may make two kinds of attacks: hand-to-hand, and missile attacks. To make a hand-to-hand attack, you must be immediately adjacent to your foe. To make a missile attack, you must be immediately adjacent, diagonally adjacent, or one square away *in a straight line*. See the diagram below.

A figure at the X could make a hand-to-hand attack against a figure in any of the squares containing a black dot. He could make a missile attack (gun or throwing spikes) against a figure in any of the dotted squares. He could not attack a figure farther away. Exception: An LC can fire his gun at ANY range.



5.2 Line of Sight. A figure can never attack an enemy if the "line of sight" between their squares is blocked. If a line drawn between the centers of their squares is blocked by a wall, piece of equipment, etc., then no attack can take place. However, an intervening figure does NOT block line of sight for missile attacks.

5.3 Multiple Combats. A combat is a single "fight." It is possible for there to be three combats during a single combat phase, if there are three Terminators in play. Then again, if they are all fighting the same foe(s), they might all be involved in the same combat. Each combat is played out separately. *Any time two or more Terminators can strike the same foe, or be struck by the same foe, they are in one combat together. If they cannot strike the same foe (or be struck by the same foe) they are in different combats.* Gunshots and thrown spikes count as "striking."

At the beginning of each combat phase, determine how many combats are taking place. Resolve one completely before going on to the next.

5.4 Procedure for Combat. Each combat goes through the following stages:

1. *Select tactics counters.* Only Terminators and Jellies can select tactics counters. A Terminator may select three tactics counters for each combat. He *must* choose from those abilities he still has. For instance, if he has three levels of ability in Lightning Foot, he could take three Lightning Foot counters. If he has only one level of Lightning Foot, he could only take one counter for it. And if (through injury) he has lost his Lightning Foot entirely, he CANNOT pick that counter.

A Jelly picks counters in the same way, except that he may pick only

two counters per combat, and picks only from those abilities he has.

A figure *cannot* pick counters for abilities he has lost. A Terminator who has only two abilities left may pick only those two counters. A Terminator or Jelly who has only one ability left will have only that one counter for each combat.

There are five different types of tactic counters: three attacking and two defending. Attacking counters are:

IRON FIST. This represents a punch. All Terminators start with this ability; some Jellies know it.

LIGHTNING FOOT. This represents a kick. All Terminators start with this ability; some Jellies know it.

WEAPONS. This counter is used to represent any of the four weapon attacks: throwing spikes, nunchaku, bo stave, or kon-go. The Terminators do not carry or use weapons, but some Jellies have them. Note that a weapon is never dropped until the Jelly has lost that ability, and that a Jelly with throwing spikes will not run out of them during the game.

The defending counters are:

MONKEY SOUL. This technique involves great agility and is useful both for dodging bullets and for scaling walls. It is a total protection against a kick, and useful against other attacks. All Terminators, and some Jellies, begin with it.

BODY OF MIST. This technique involves concentration as well as physical skill. It provides total protection against punches and against all hand-to-hand attacks by untrained foes. It is useful against kicks, but will not protect against gunshots. All Terminators, and some Jellies, begin with this ability.

There are no counters for *MOUNTAIN HEART*; it is not a combat ability.

A player may not look at the counters his opponent has chosen until they have been played. He may not study the unchosen counters to determine what has been picked.

2. *Play tactics counters.* The Terminator player chooses who is to play first. (Exception: If throwing spikes are to be involved in the combat, they *must* be the first counter played – so the CloneMaster automatically goes first if he has spikes and is using them.)

If the first counter played is a defensive counter, it has no effect. If it is an offensive counter, it represents an attack. The player who put down that counter states who is being attacked.

Play of counters alternates. The first player plays one counter. Then the second player plays one counter. Play alternates until one player has used all his counters for that combat. At this time the other player may immediately play all his remaining attack counters. An attacking counter represents an attack and is modified by the *next counter played.*

When the first attack counter is played, the attacker states which figure is attacking and which figure is being attacked. The other player then replies with a counter. The effect of the *first* counter played is then figured by reference to the CRT. If the figure being attacked was NOT the one playing the reply counter, roll in the "Inactive" column (for most figures) or the "Helpless" column (for Servants and unconscious figures). If the figure that was attacked WAS the one playing the reply counter, roll on the CRT column for that type of reply.

Note: If figure A punches figure B, and figure B replies with (for instance) a kick, it does not matter *where* the kick is directed (back at A, at another figure, or at a piece of equipment). The player does not have to state whom B is kicking until it is his opponent's turn to counter *that* attack. Figure A's attack is resolved as "punch vs. kick" no matter where the kick is going.

If the CRT indicates a hit, the target figure loses one ability (if it is a Terminator or Jelly) or is removed from play (if it is any other figure).

Now: if the *second* (reply) counter was itself an attack, the person who played it must state whom *that* attack was directed against. The first player must then reply to that counter . . . and so on. If the second counter was only a defense, it has no further effect, and the first player may play another counter if he has one. If this seems complex, read the Example of Play, below. Once understood, the system is simple.

As long as a player has counters left, he MUST play one when his turn comes to reply to his opponent's play – even if the counter he plays is totally useless.

Should it happen that a figure has attack counters left but no one left to attack (or defense counters left but nothing left to defend against), those counters may be discarded. That figure's combat is ended for the time being.

3. *Untrained attacks.* After the Terminators and Jellies have played all their *attack* tactics counters, "untrained attacks" may be made by unarmed Technicians and Servants standing next to Terminators. Roll one die. If the result is equal to or less than the number of figures making the attack, the Terminator is hit and loses one ability. Example: If a Terminator is attacked by three Servants, he loses an ability on a die roll of 1, 2, or 3. However, if a Terminator has a "Body of Mist" counter that he has not yet played, he may play it now and be immune to all those attacks.

4. *Gunfire.* This is the last part of a combat. Each figure with a gun (CloneMaster, armed Technicians, or Local Constabulary) may fire one shot if a Terminator is within range. Each shot hits on a roll of 1, 2, or 3. If a Terminator has one or more Monkey Soul tactics counters left, he should play them now. Each one played will allow him to dodge one bullet. These counters must be played *before* results of the gunfire are rolled.

A Terminator loses one ability for each gunshot that strikes him.

When all gunfire has been ended, that combat is over. Go on to the next combat. When all combats have been resolved, go on to the next phase of that turn.

EXAMPLE OF COMBAT – I

First, a very simple example. One Terminator is standing next to Jelly 1. Both are uninjured. The Terminator's abilities are Fist-1, Kick-2, Mist-1, Soul-1, and Heart-2. The Jelly's abilities are Kick-2, Heart-1.

The Jelly has little choice; he picks two Kick counters. The Terminator is entitled to pick three counters. He choses two Kicks and a Monkey Soul.

The Terminator elects to go second, so the Jelly starts by playing one Kick. The Terminator responds with a kick of his own. Resolve this as follows: Attack – kick. Defense – kick. Cross-referencing these on the CRT, we see that the Jelly needs a 1, 2, or 3 to hit. He rolls a 4, which misses.

Now the Terminator's kick can take effect. The Jelly must reply. He plays his other Kick counter. Again we have an attack of "kick" and a defense of "kick." The Terminator must roll a 1, 2, or 3. He rolls a 2, which hits. The Jelly loses one ability. This does NOT affect this combat, but *will* affect his later play. (He should take the injury to his Mountain Heart – see 5.6 for explanation.)

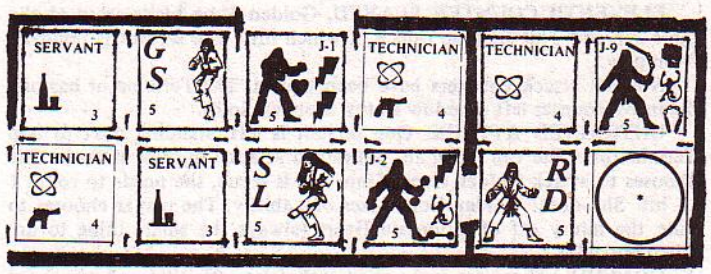
Now the Jelly's second kick can take effect. The Terminator must reply. He plays his Monkey Soul counter. This, as we see from the CRT, is a total defense against a kick; no roll is needed.

The Monkey Soul is not an attack. However, the Jelly is out of counters and cannot reply. The Terminator has one Kick counter left, and he gets to play it. Since the Jelly has no possible reply, the "kick" attack is rolled on the "Inactive" defense column. The Terminator needs a 1, 2, 3, or 4. He rolls a 4, which hits. The Jelly loses another ability.

At this point, both figures have used up all their counters. Since no other figures are involved in this combat, it is over. The Jelly has taken two injuries, which must be marked on the record sheet. The Terminator is unhurt.

EXAMPLE OF COMBAT – II

Now for a complex example. This is much more complicated than most combats will be in the game. It covers almost every possibility. It takes place in the situation shown below:



Terminator figures:

Golden Song is unwounded. His abilities are Fist-2, Kick-1, Mist-1, Soul-2, Heart-1. He choses two Fist and one Kick counters.

Shadow Lotus is slightly wounded. Her abilities are now Fist-1, Kick-1, Mist-0, Soul-1, and Heart-1. She choses one Fist, one Kick, and one Monkey Soul counter.

Rising Dream is badly injured. His abilities are now Fist-2, Kick-0, Mist-0, Soul-0, and Heart-0. He has no choice but to take two Fist counters.

CloneMaster figures:

Jelly 1 is slightly wounded. His abilities are now Kick-1 and Heart-1. Since Mountain Heart is of no use in battle, he can take only one counter: Kick.

Jelly 2 is uninjured. He can take two counters. His abilities are Kick-1, Weapon-1, and Soul-1. He chooses the Kick and Weapon tactics counters.

Jelly 7 is injured. Of the three talents he started with, he has only one: Weapon-1. However (as shown by the counter) his weapon is throwing spikes. That means he can attack Rising Dream without being in dan-

ger himself – in fact, even if he had other abilities left, he could not use them from where he is at the moment. He takes the Weapon counter as his only tactic.

The CloneMaster also has three Technicians (two armed) and two servants involved in the battle. Because of the position of the units, the entire battle must be handled as a single combat.

FIRST COUNTER PLAYED. Jelly 7 throws spikes at Rising Dream.

SECOND COUNTER PLAYED. Rising Dream kicks – not at a human target, but at the clone tank. (See Section 5.8, Destroying Equipment.) The Jelly's attack, then, is resolved as "spikes vs. kick." He needs a 1, 2, or 3. He rolls a 5, which misses. Rising Dream's kick against the clone tanks is automatically successful. The clone tank is replaced with a "destroyed" marker.

THIRD COUNTER PLAYED. It is the CloneMaster's turn again. Jelly 2 attacks Shadow Lotus with his nunchaku.

FOURTH COUNTER PLAYED. Shadow Lotus kicks at Jelly 1. This means that Jelly 2's attack is resolved as "weapon vs. kick." He needs to roll a 1 or 2. He rolls a 2, which hits. Shadow Lotus loses one ability. She scratches the remaining Mountain Heart from her record sheet.

FIFTH COUNTER PLAYED. The CloneMaster's turn again. Jelly 2 kicks at Shadow Lotus.This means that Jelly 1 (whom Shadow Lotus just attacked) is inactive. Resolve Shadow Lotus' attack as "kick vs. inactive." Shadow Lotus must roll a 1, 2, 3, or 4. She rolls a 3, which hits. Jelly 1 is wounded and loses another ability. He will choose to lose the Mountain Heart, and is now down to one ability.

SIXTH COUNTER PLAYED. The Terminators' turn. Golden Song punches at Jelly 1. This means that Shadow Lotus is inactive – so the Jelly 2-attack against her (above) is resolved at "kick vs. inactive." The Jelly rolls a 5, which misses.

SEVENTH COUNTER PLAYED. CloneMaster's turn. All his counters have been played except one – the "kick" counter for Jelly 1. He plays it, kicking at Golden Song. This means that Golden Song's attack against him (above) is resolved at "fist vs. kick." Golden Song needs a 1, 2, or 3. He rolls a 1, a hit. Jelly 1 must lose another ability. Since he had only one left, that means he has lost ALL his abilities. He falls unconscious. The kick that he just made *is not completed*. No roll is needed.

The CloneMaster is now out of attack counters. The Terminator may now play all his remaining attack counters, one at a time.

EIGHTH COUNTER PLAYED. Rising Dream fists the technician "above" him. Technicians have no counters to play. The attack is resolved on the "fist vs. technician" column. Rising Dream needs a 1, 2, 3, or 4. He gets a 4. The technician is removed from play.

NINTH COUNTER PLAYED. Shadow Lotus fists Jelly 2. The Jelly has no counters left to play, so the attack is rolled at "fist vs. inactive." A 1, 2, 3, or 4 will hit. She rolls a 2. The Jelly is hit and must lose an ability. He choses to lose Monkey Soul; it is scratched off his sheet. (The opponent knows that he has lost an ability, but not which one!)

TENTH COUNTER PLAYED. Golden Song has two kicks left. He kicks at the servant beside him. Rolling on "kick vs. helpless," he needs a 1 through 5. He rolls a 6, which misses.

ELEVENTH COUNTER PLAYED. Golden Song kicks again at the same servant. This time he rolls a 5, which hits. The servant is removed from play.

Now all attack counters have been played. The Terminator has one defensive counter left (Shadow Lotus' Monkey Soul).

UNTRAINED ATTACK. One servant is left, standing next to two Terminators. She can make an "untrained attack" on one of them. She chooses to attack Golden Song. Since she is alone, she needs to roll a 1 to hit. She does! Golden Song loses one ability. The player chooses to take the injury off of Mountain Heart (always the smart thing to do, when possible).

GUNFIRE. There are two armed technicians. Neither one can shoot at Rising Dream (see diagram). Either one, however, can shoot at either of the other two Terminators. Suspecting (correctly) that Shadow Lotus was holding out a Monkey Soul counter, the CloneMaster player has them both fire at Golden Song. The table shows that to hit with "gun vs. inactive" you need a 1, 2, or 3. One tech rolls a 5 (missing). The other rolls a 3 (hitting). Golden Song loses another ability. The Terminator player chooses to scratch Body of Mist from his record sheet. NOTE: If one tech had fired at Shadow Lotus, she would have played the Monkey Soul counter and the shot would have had no effect. If both had fired at her, she would have played the counter to negate one shot – but the other one would have been fired normally.

That concludes this combat.

5.5 Results of injury. Each time a character is injured by an enemy attack, he is affected as follows:

Terminators and Jellies lose one ability. When all abilities are lost, the counter falls unconscious. One further injury to an unconscious Terminator or Jelly will kill him. An unconscious warrior may possibly recover consciousness with Mountain Heart (see below).

Other Figures are killed by a single injury. Remove them from play. (Against servants, a Terminator might strike to incapacitate rather than kill – but the result is the same for play purposes.)

5.6 Mountain Heart. This is the fifth skill taught by the Society of Thanatos. It is not a combat tactic; it is the ability to recover quickly from severe injury. A figure who takes injury should *always* assign it to Mountain Heart if possible. Once each turn (during the Recovery Phase) each figure with damage to Mountain Heart rolls one die. On a roll of 1 or 2, that figure *recovers* one level of Mountain Heart. A figure gets only one roll per turn (no matter how many levels of Mountain Heart he had) and can never recover more than one level per turn. Mountain Heart may never recover past its original level. Once you have recovered your original level, you stop rolling for recovery. *Other skills may never be recovered.* Mountain Heart is a reservoir of inner strength; it does not heal broken arms and legs, or recover lost weapons. Note: The recovery roll is NOT secret.

5.61 Recovery from unconsciousness. An unconscious figure who has Mountain Heart may, if he rolls a 1 or 2, recover from unconsciousness. However, all his other abilities are still gone and may not be recovered. This means that the figure is good for nothing except blocking the enemy; he cannot fight or destroy things. If a figure recovers consciousness while another figure is in its square, the owner displaces the newly recovered figure to the closest empty square.

5.62 Effects of unconsciousness/death. When a Terminator or Jelly becomes unconscious, note it on his record. If he had any attack counters that had not taken effect, they are lost. His earlier attacks are unaffected – but if he had just made an attack which had not yet been rolled, that attack does not occur. NOTE: When a Jelly goes unconscious and does *not* have Mountain Heart, you may remove him from play immediately UNLESS you are playing a scenario where the Terminator gets points for killing Jellies. In that case, leave him there; the Terminator will have to hit him again to score any points for him.

5.7 Destroying armored doors. There are two armored doors in the CloneMaster's citadel. A Terminator cannot move through one of these doors until it is destroyed. To destroy an armored door, a Terminator must throw a kick or punch at it, and then roll a 1 or 2. A 1 or 2 destroys the door; other rolls have no effect.

5.8 Destroying vital equipment. There are several pieces of vital equipment (marked with * symbols) in the citadel. A chief Terminator objective is to destroy these. To destroy a piece of equipment, a Terminator need only throw a single kick or punch at it during combat. Destruction is automatic. NOTE: To destroy a clone tank (circular symbol) a Terminator must be adjacent to it. To destroy a computer (rectangular symbol) a Terminator must be in the *same* square with it.

5.9 The overlook. A figure on the overlook cannot make hand-to-hand attacks against a figure in Central, and vice versa. A figure on the overlook CAN make a missile-type attack against a figure in Central, and vice versa. A figure in Control does not have line-of-sight for a gunfire attack on a figure in the Upper Main Corridor, and vice versa.

6.0 SCENARIOS

Below are three different scenarios for *Kung Fu 2100.* Players are encouraged to invent their own scenarios; extra pieces and optional rules are included for this. Players also may wish to draw new building maps. If you come up with an especially good and balanced scenario, *The Space Gamer* will consider it for publication.

6.1 Basic scenario. This is the first scenario you should play. It's a good introduction to the game.

CloneMaster Setup: The CloneMaster takes the following counters: 1 CloneMaster, 2 armed technicians, 10 unarmed technicians, 12 servants, and 8 Jellies. He may pick these from numbers 1 through 10 only; Jellies 11 and 12 may not be used. He places all units on the game board, upside-down, subject to the following restrictions:

(a) Servants may only go into a room or hall with an "S" in the lower corner. Jellies may only be set up in a room or hall with a "J." Techs may only be set up in a room or hall with a "T." The CloneMaster may go anywhere.

(b) No figure may be set up in a square adjacent to *any* door.

Terminator Setup: The Terminator has three figures. Each of these has a total of seven levels of ability: one level in each of the five talents, and two additional levels added anywhere. (Two possible choices would be: Fist-1, Kick-3, Soul-1, Mist-1, Heart-1, OR Fist-2, Kick-1, Soul-1, Mist-1, Heart-2.) Show the beginning abilities for each figure on the Terminator Record Sheet by scratching out the abilities he does *not* have. (Note: You may photocopy as many Record Sheets as you like.)

Terminator Entry: As specified in Section 4.1.

Length of Game: 10 turns.

Victory Conditions: CloneMaster total victory: CloneMaster survives, all Terminators killed. CloneMaster victory: CloneMaster dies but some of his equipment survives; all Terminators killed. Terminator victory: The CloneMaster, and all seven pieces of vital equipment are destroyed. Ter-

minator total victory: As above . . . but at least one Terminator escapes (see Section 4.7) before the end of Turn 10.

Comments: The Terminators will not try to escape unless the CloneMaster AND all his equipment is destroyed; that is their whole mission, and they will die for it. If even one clone body or computer memory survives intact, the CloneMaster will live again. On Turn 10, the building will be surrounded and helicopters will land on the roof with sleeping gas; if the Terminators aren't gone by then, they're as good as dead.

6.2 Advanced Scenario. Play this scenario when the Terminator player starts winning the basic scenario most of the time. It's for more experienced players.

CloneMaster Setup: As before – but the CloneMaster gets 4 armed technicians and 8 unarmed technicians.

Terminator Setup: As before.

CloneMaster Reinforcements: Beginning on Turn 6, and each turn thereafter, 3 Local Constabulary come in the front door. LC are always "released." They are just like armed technicians *except* that they can fire at ANY range if they have a clear line of sight. Thus, by Turn 10, the Terminators will have a dozen policemen to contend with!

Length of Game: 12 turns.

Victory Conditions: As before.

Comments: Now it's a little harder for the Terminators to win!

6.3 Solitaire Scenario. One player can play both sides, or two players can play it as a regular game. When you play solitaire, the CloneMaster counters are controlled by certain rules.

Background: In a routine raid, the CloneMaster's secret police picked up a prisoner and brought him in for questioning by their master. They didn't know that their captive was a fully trained Terminator, captured only by sleep gas. As the CloneMaster walks into the room, the prisoner suddenly shatters his handcuffs and explodes into action . . . .

Setup: For solitaire play, the player picks all the figures that would be used in the *Advanced Scenario*, (except LC's) but only one Terminator. The Terminator has seven abilities. He starts in the far north square of the Servants' Work Area. The CloneMaster stands directly south of him. One Jelly stands beside the CloneMaster, to the east.

The other CM counters being used are mixed up, face down. One is placed in each room or hall (except the loos). An extra one is placed in each room containing vital equipment. Then the other counters are placed randomly on the board. Don't put more than two in any room; don't set up any figure in a doorway. All CloneMaster counters remain upside down; neither player knows which counters are where.

Terminator Objectives. The Terminator must take advantage of his opportunity to do as much damage as possible. He may try to escape, but only if (a) he is down to only 1 or 2 abilities, (2) it is turn 11 or 12, or (3) the CloneMaster is dead and all vital equipment has been smashed.

Length of Game: 12 turns.

CloneMaster Reinforcements: As in the *Advanced Scenario.*

CloneMaster Release and Movement: In solitaire play, the CloneMaster's minions are governed by the following rules:

(a) All units in a room are released when the Terminator enters it.

(b) At the beginning of each CloneMaster movement phase, the two upside-down figures *closest* to the Terminator (in squares of movement) are released.

(c) All released figures will move to attack the Terminator *except* servants and unarmed techs, who will run to the nearest equipment and protect it by crowding around it. Jellies will choose attack tactics rather than defensive ones whenever possible, and will always lose defensive abilities first. Figures with guns will fire from "safe" rather than adjacent squares.

Victory Conditions: are on a point system. The Terminator gets 5 points for killing the CloneMaster, 5 for each piece of equipment destroyed, and a bonus of 50 points if he kills the CloneMaster *and* destroys all the equipment. He gets 2 points for each Jelly killed. No points for constabulary, servants, techs, armored doors, etc., or for Jellies that are merely injured. The CloneMaster gets 30 points for killing the Terminator; 60 points if the Terminator is captured (by being in the building at the end of Turn 12).

The side with the most points wins. A win by more than 30 points is a "total" victory.

Comments: If this is a two-player game, the CloneMaster player sets up as per the *Advanced Scenario* (but no more than 2 figures per room) and moves his units as he pleases, but must use the solitaire release rules. Start the Terminator with a 10-point bonus; this is harder than solitaire.

7.0 OPTIONAL RULES

These are rules which may be added or changed to change the balance of the game or to design your own scenarios.

7.1 More or fewer Terminators. Example: to make the basic scenario really hard for the Terminator player, try it with only two attackers.

7.2 Changing Terminator Abilities. Try giving each Terminator eight abilities rather than seven. The change makes a big difference.

7.3 More and Better Jellies. A total of 12 Jelly counters are included – including two Jellies that start off with *four* levels of ability each. They can beef up the CloneMaster's force in a hurry.

7.4 Extra Equipment. Counters for extra armored doors and vital equipment are included. To make the Terminator's task harder, the CloneMaster may be given one or more extra armored doors and/or computer banks, to place wherever he likes.

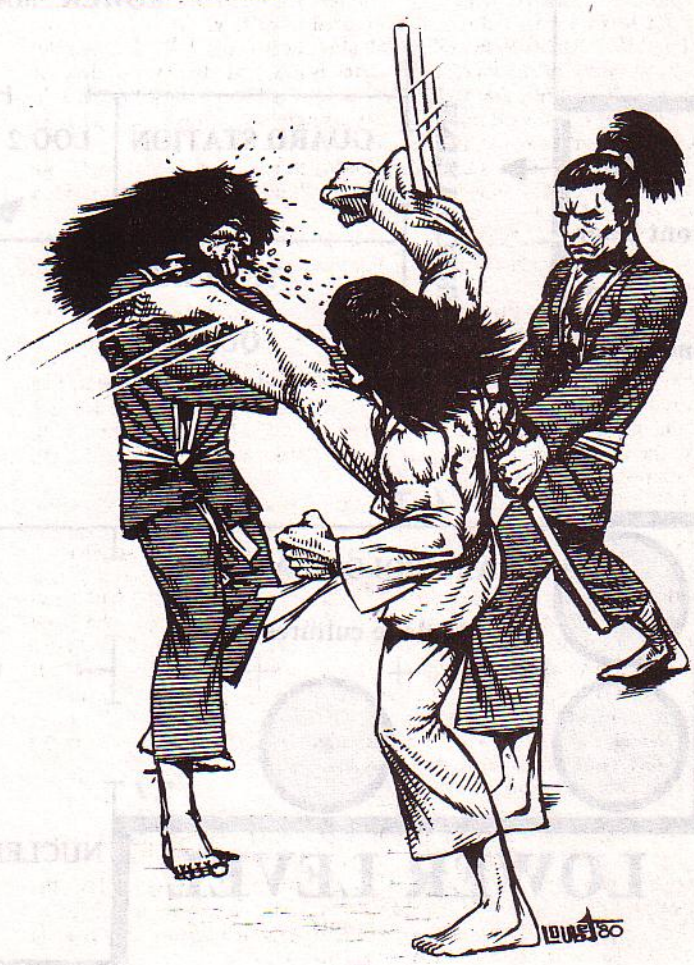
Other optional rules and scenarios will suggest themselves as you play. What about four Terminators against a fortress guarded by all 12 Jellies?

8.0 HINTS FOR PLAY

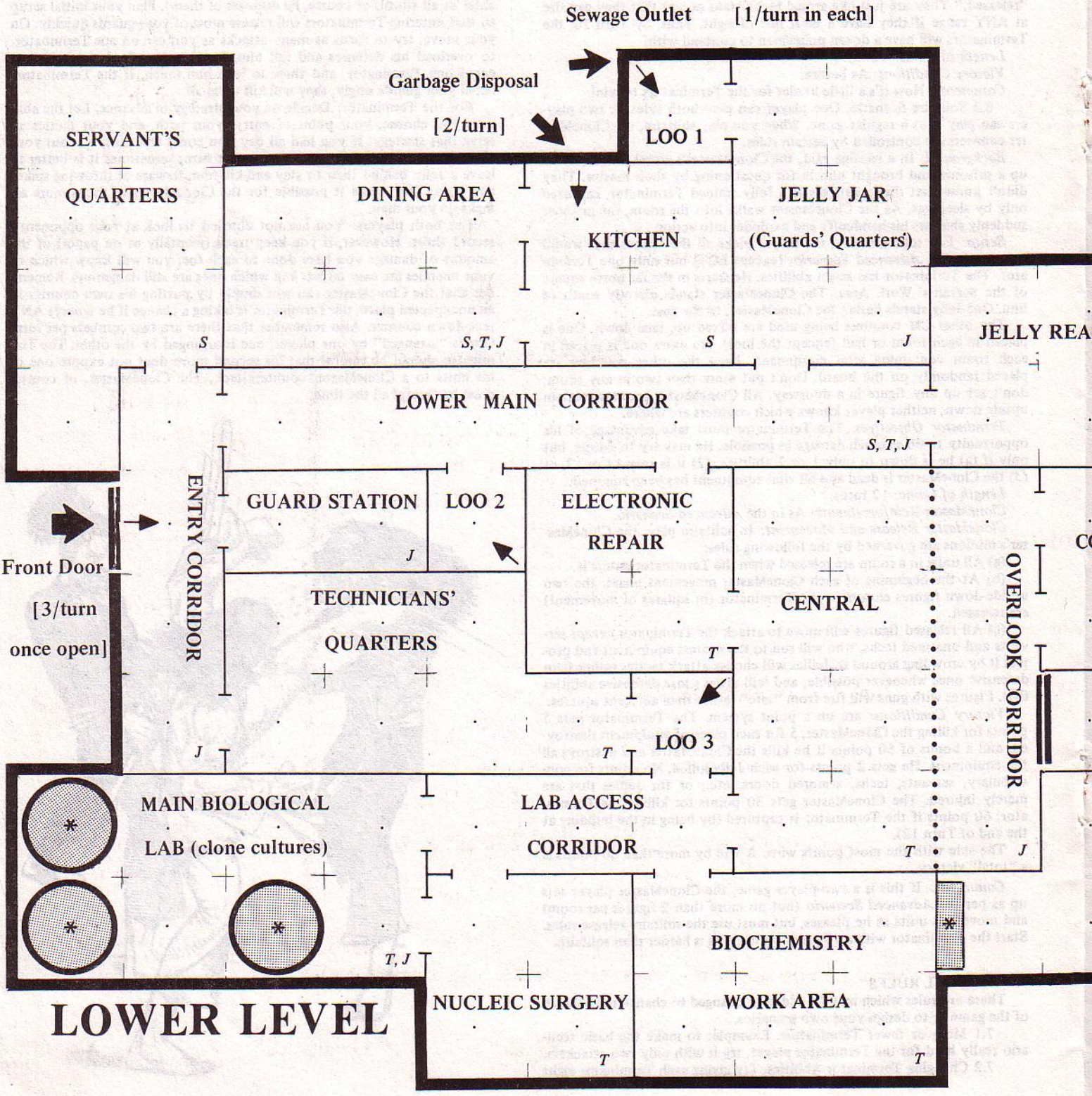
For the CloneMaster: Servants and technicians aren't as useless as they seem. Properly played, they can interfere with a Terminator's movement, slowing him fatally. If a room is full of servants, an enemy can't enter at all (until, of course, he disposes of them). Plan your initial setup so that entering Terminators will release most of your guards quickly. On your move, try to focus as many attacks as you can on one Terminator, to overload his defenses and kill him. It takes two fresh Janizaries to equal one Terminator, and three to hurt him much. If the Terminators catch your guards singly, they will kill them all.

For the Terminator: Decide on your strategy in advance. Let the abilities you choose, your point of entry, your path, and your tactics all serve that strategy. If you had all day you could win easily . . . but your time is very limited. You move twice per turn; sometimes it is better to leave a Jelly behind than to stay and kill him. Beware of throwing spikes and guns; they make it possible for the CloneMaster to focus more attacks on your men.

For both players: You are not entitled to look at your opponent's record sheet. However, if you keep track (mentally or on paper) of the amount of damage you have done to each foe, you will know which of your enemies are easy targets and which ones are still dangerous. Remember that the CloneMaster can win simply by putting his own counter in an unexpected place; the Terminator is taking a chance if he ignores ANY face-down counter. Also remember that there are two combats per turn. One is "arranged" by one player; one is arranged by the other. The Terminator should be careful that his second move does not expose one of his units to a CloneMaster counterattack. The CloneMaster, of course, must be careful all the time.



KUNG FU 2100


Sewage Outlet [1/turn in each]
Garbage Disposal [2/turn]
SERVANT'S QUARTERS
LOO 1
DINING AREA
KITCHEN
JELLY JAR (Guards' Quarters)
JELLY REA
S
S, T, J
S
J
LOWER MAIN CORRIDOR
S, T, J
ENTRY CORRIDOR
GUARD STATION
LOO 2
ELECTRONIC REPAIR
Front Door [3/turn once open]
J
TECHNICIANS' QUARTERS
CENTRAL
OVERLOOK CORRIDOR
T
LOO 3
J
T
MAIN BIOLOGICAL LAB (clone cultures)
LAB ACCESS CORRIDOR
T
J
BIOCHEMISTRY WORK AREA
T, J
NUCLEIC SURGERY
T
T
LOWER LEVEL

1	2	3	4	5	6	7	8	9	10	11	12

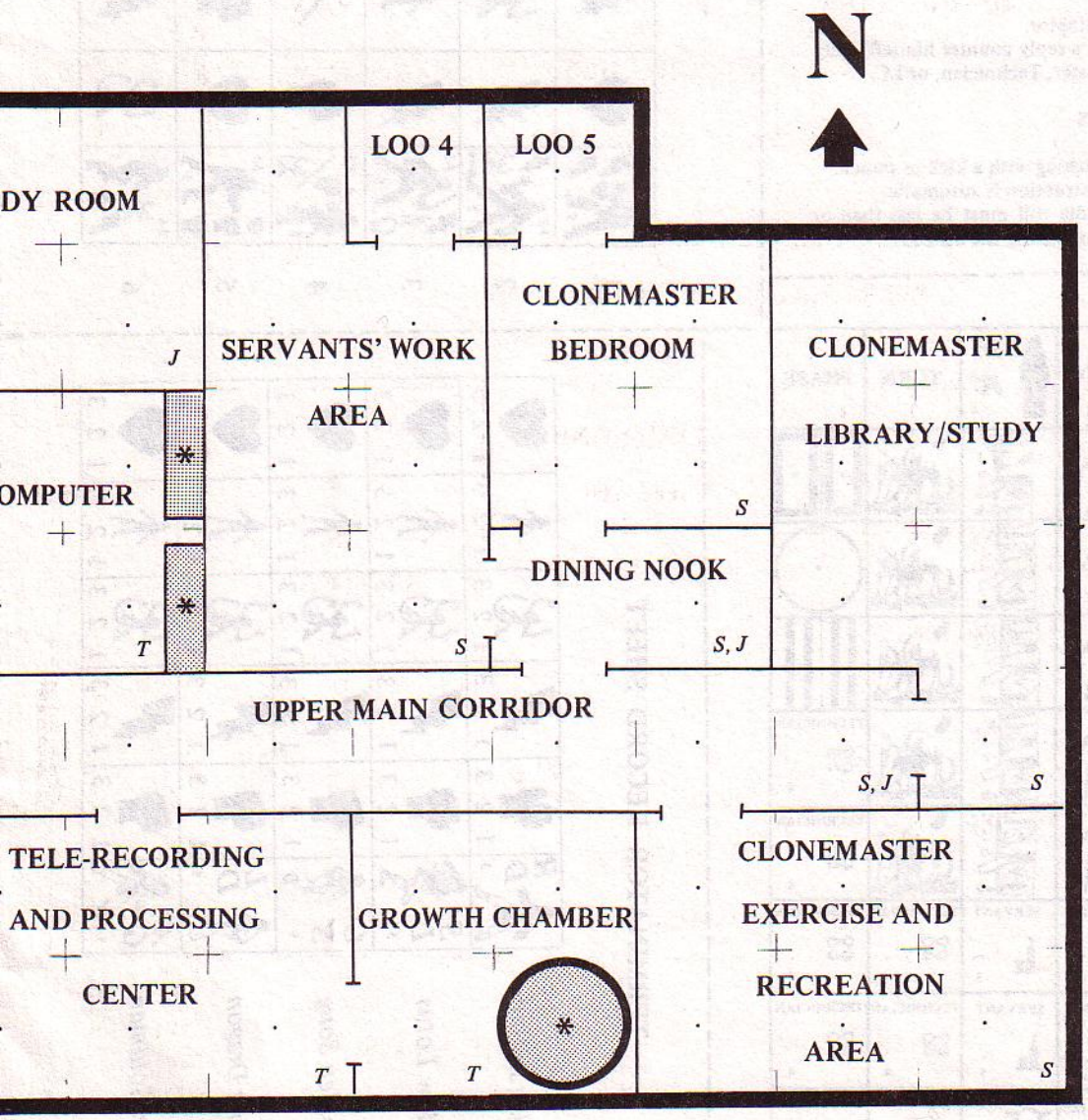
GAME-TURN

Term Move 1	Combat 1	Term Move 2	Clone Move	Combat 2	Recovery	Advance Game Turn

PHASE

SYMBOL CHART

- *Terminator*
- *CloneMaster*
- *Jelly*
- *Technician*
- *Servant*
- *Local Constabulary*
- *Armed figure*
- *Iron Fist*
- *Lightning Foot*
- *Body of Mist*
- *Monkey Soul*
- *Mountain Heart*
- *Bo Stave (weapon)*
- *Nunchaku (weapon)*
- *Kon-go (weapon)*
- *Throwing Spikes*
- *Clone tank*
- *Destroyed clone tank*
- *Computer*
- *Destroyed computer*
- *Armored door*
- *Common door*
- *Entry point*
- *Change in elevation*



UPPER LEVEL

© 1980 by Steve Jackson

COMBAT RESULTS TABLE

REPLY (Next counter played by target of attack)

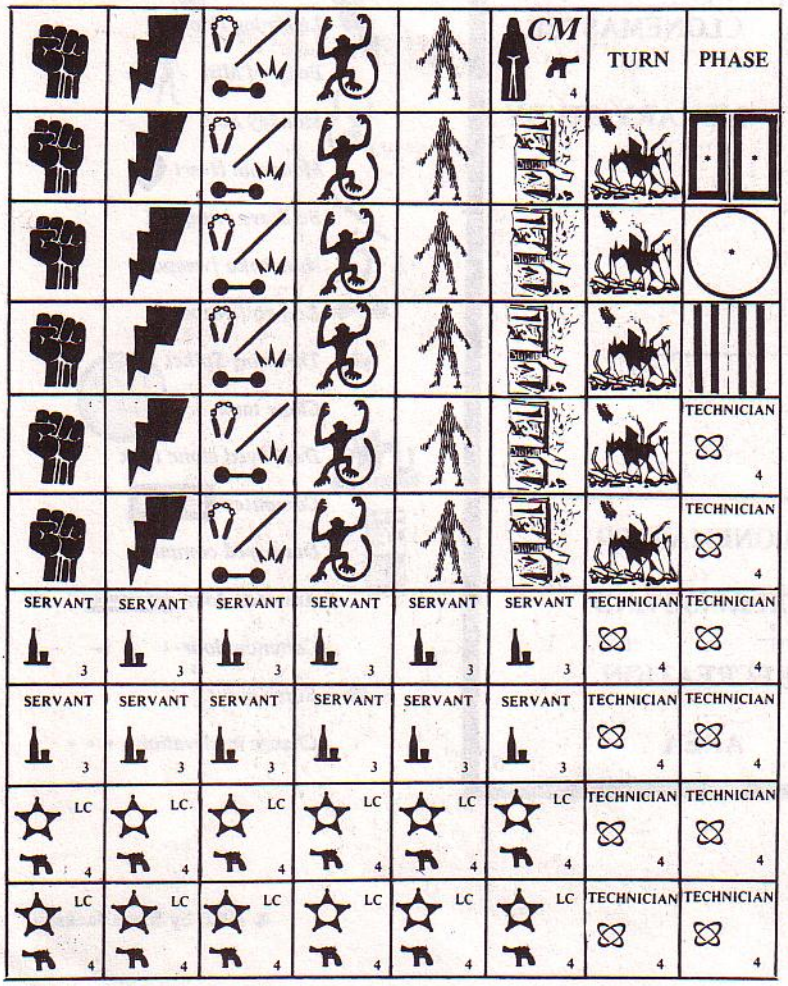
ATTACK	Helpless	Inactive				
	12345	1234	123	123	*	1
	12345	1234	123	123	1	*
	1234	123	12	12	1	1
	123	123	123	123	123	1
	123456	123	–	–	–	*

* Attack has no effect.

Helpless: Servant, or unconscious Jelly or Terminator.
Inactive: Jelly or Terminator who did not play a reply counter himself; Jelly who replied with a weapon attack; CloneMaster, Technician, or LC.

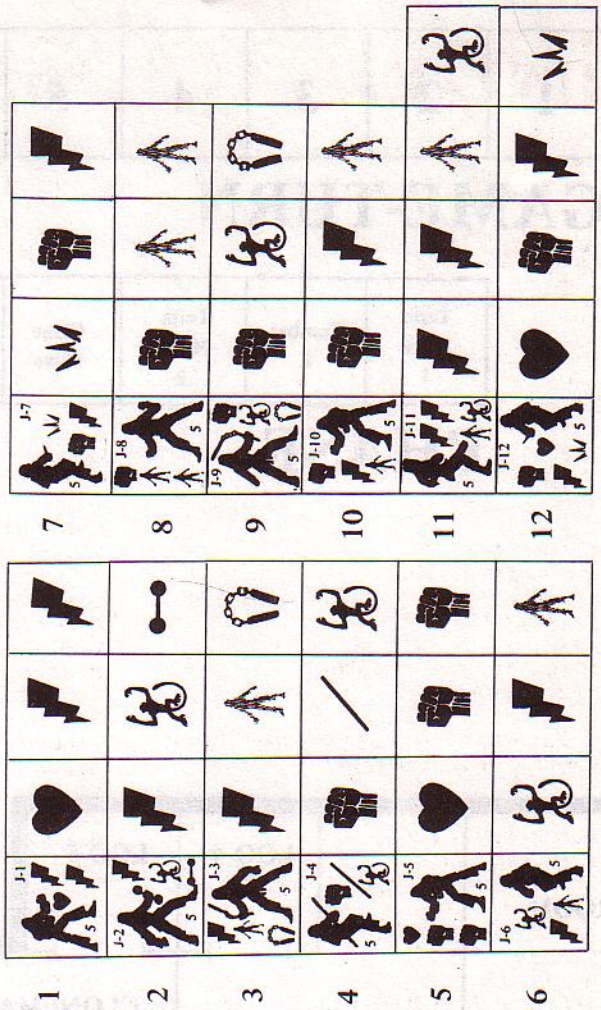
OTHER ATTACKS

To destroy an armored door: Roll a 1 or 2, attacking with a kick or punch.
To destroy vital equipment: Kick or punch. Destruction is automatic.
Untrained attacks: To hit a Terminator, the die roll must be less than or equal to the number of servants and/or techs making the attack.

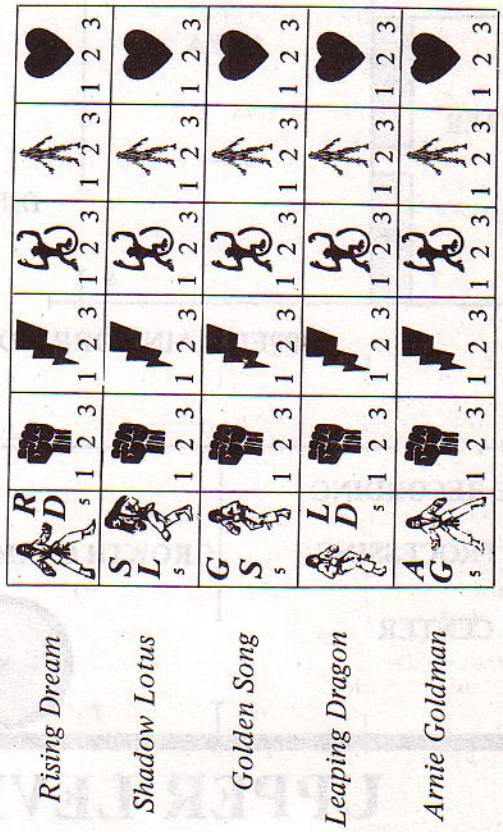


Counter Set II

JELLY RECORD SHEET



TERMINATOR RECORD SHEET



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INDEX TO GAME ARTICLES

The Space Gamer

issues 15-29

This is our first index of game articles and reviews. It covers issues 15 through 29 (which, by no coincidence, are the only ones for which back issues are available). All articles are listed by game. Some listings may refer to more than one article; some articles may have more than one listing. The index is coded:

c = Capsule Review
d = Designer's Article
e = Errata
f = Featured Review
g = Game
m = mentioned in Game Master
s = Strategy Article
v = Variant

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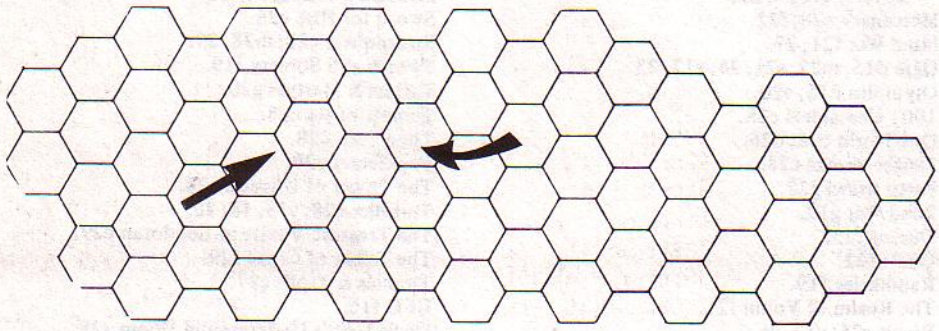
GAME DESIGN: Theory and Practice

by Schuessler and Jackson

IV: Mapping and Movement



Some maintain that the heart of any wargame is the combat results table (CRT). I would argue that the real basis of a wargame is the map and turn scales. We said earlier that the concept of space is the single factor that separates wargames from other types of simulations. If so, then the designer's decisions of how much space will be represented by the map, and how far the units may move each turn, certainly represent a crucial aspect of game development. Further, these decisions will, to a large extent, dictate the type of CRT to be used, the size of the basic unit to be represented, and the counter "density" on the map.

Scale is the representation of a proportion between two items. In wargaming, this simply means that some increment of the game (hexes, turns, counters) corresponds to some other increment of the game's "environmental context." The only limitation (at present) is that the relationship must remain constant during the course of the game. For example, a map scale of 1:250,000 means that one inch, millimeter, mile, etc., is equal to 250,000 of the same things in the environment represented. "Large scale" means that less area is represented in more detail; "small scale" means that more area is represented. (In order to represent a large-scale conflict, you need a small-scale map!)

Map Scale

The designer's first decision is how much "real" space will be represented by the map. There are, of course, certain constraints on this decision. First is the simple fact that the human reach is about three feet, so a horizontal map shouldn't be more than six feet wide. Some gamers have been going to vertical play, using magnetized counter holders and a map mounted on a wall. Vertical play would, theoretically, extend the limits to the size of the wall that you could procure for mounting.

Second are the financial limits of the game's selling price. Bigger maps mean more expensive games, and the higher the price tag, the fewer units that sell. Somewhere there is a limit to the size of the piece of paper that will be used for the map.

After the size of this paper is determined, the designer is again constrained in his selection of scale by the level of play: grand strategic, strategic, operational, tactical, sub-tactical. Actually, the level of play and the map scale move in tandem. You don't decide to use a large-scale, 1:50,000 map and then design a strategic level game. On the other hand, if the requirement is for a Battle of the Bulge on an 11" x 17" map, then the level of play is pretty well dictated by the need to fit a certain historical area into a certain space. The use of divisions and corps (as opposed to regiments and battalions) follows from the scale requirement.

For historical simulations, we might also mention the "edge" factor. Wargames rarely follow the historical course of events. If the map edge ends just at the spot where a critical event is forming, then the designer has botched the scale or failed to provide enough "incentive" in the rules to keep the action in the middle of the board.

After all this talk about "constraints," it might seem like the designer's crucial decision on scale is a fairly mechanistic affair. Not really. Even within the constraints, there is plenty of room to tinker with the scale. The designer will have to live with the decision through the rest of the process and the player will have to live with it through the life of the game.

Hexagons

Every three or four months some writer laments the fact that wargaming is built around the hex grid. Hexes in wargames go back to 1952, when they were used in some of the government-sponsored "think tanks." In commercial wargames, hexes were first used in 1961. Wargamers have been looking at that beehive pattern for a long time.

Actually, the hex grid has so far been the most successful design feature in wargaming. It's obvious that we need some kind of grid, so the question is not "Why use hexes?" but "What would you use instead of hexes?" There is, of course, the possibility of a "no grid" game, but you have the same problems that the miniatures folk have had for many years: what exactly is 28 inches after you've turned left and right twice?

Unlike other grids, hexes give is the same distance moved regardless of direction. With a square grid, for example, you get a significant advantage in boardspace by moving diagonally, as any *Tactics II* player will testify. Some games use "area" movement, but in many ways this "innovation" is simply a ploy for using big, odd-shaped hexagons.

*For some purpose, squares still work! **Kung Fu 2100** (in this issue) uses squares to good effect in a small-scale game. Note that diagonal movement is prohibited. One thing about squares: they represent a right-angled floor plan much better than hexagons. Look at the hex-shaped buildings in **Sniper**.*

–SJ

The half-inch counter, which is a good size for handling and for visual clarification of the printed information, adapts nicely to the 16 mm hex. This is a happy compromise between having extra space in the grid to allow for counter handling (which is not available in the half-inch square) and wasted space, i.e., a grid too large for the average stack of counters.

In 1970 *PanzerBlitz* introduced the 5/8ths inch counter and the 19 mm hex. Earlier, *Kriegspiel* had used 11/16ths inch counters and 23 mm hexes. In the case of *PanzerBlitz*, the larger counter (and hex) was deemed necessary because the designer wanted to show vehicle silhouettes on the counter. Since then, we

have seen games with silhouettes on half-inch counters, indicating that the enlarged size was unnecessary. The *Kriegspiel* enlargement was not necessary for visual clarification, since only standard U.S. military symbols were used. This experience is also instructive. Bigger hexes mean less playing area; thus the designer must weigh the trade-offs carefully when departing from the "standard" of the 16 mm hex. I haven't come across anything smaller than the half-inch counter; conversely, some hex grids have been going to 14 mm to allow more hexes on the map. I some instances, this reduction causes handling problems if there is a large counter in the game.

But some very small games have smaller counters. Most Microgames, for instance, have 7/16ths inch counters and 14 mm hexes. The first such games had even smaller hexes, but it proved impossible to handle the counters effectively. –SJ

We talk about hex "grain." The "grain" is simply the straight row of hexes. Moving or attacking "with the grain" gives a slight advantage over moving or attacking "against the grain." The designer will usually set the grain against the axis of the two opposing forces to allow for a more interesting game. See Figure 1.

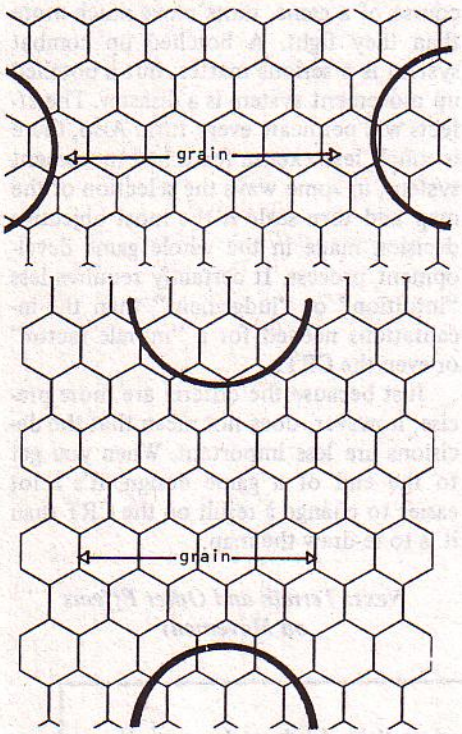


Figure 1
Opposing forces on an axis with the grain and against the grain.

In terms of scale, the 16 mm hex is most interesting. Since the relationship between kilometers and miles is about 16:10, we can convert between metric and English and stay with whole numbers. This is especially important if you're taking terrain off of standard maps. Most maps work in rounded scales (e.g., 1:50,000, 1:1,000,000), and this curious relationship saves a lot of unpleasant math. See Figure 2.

If the scale is:	Then one 16 mm hex equals:
1:12,500	200m or 220 yds (1/8 mi.)
1:25,000	400m or 440 yds (¼ mi.)
1:50,000	800m or 880 yds (½ mi.)
1:100,000	1.6km or 1 mi.
1:250,000	4km or 2.5 mi.
1:500,000	8km or 5 mi.
1:1,000,000	16km or 10 mi.
1:2,000,000	32km or 20 mi.
1:5,000,000	80km or 50 mi.
1:10,000,000	160km or 100 mi.

Figure 2
Common map scales and 16 mm hex equivalents, metric and English.

Determining Raw Movement

Raw movement is the ability of a given unit to move as far as possible in a certain length of time, travelling on a prepared surface, and unimpeded by weather, terrain, etc. It represents optimal conditions, and gives us our baseline for how we will handle game movement. Raw movement is a function of the map scale, the turn scale, and the unit's speed, represented by the equation:

$$\frac{\text{Speed of Unit} \times \text{Length of Turn}}{\text{Scale of Hex}} = \text{Number of hexes moved per turn.}$$

In this formulation, we must set the speed of the unit in the same increments as the scale and the turn. That is, if the speed is km/hr, then the scale of the hex must be in kilometers, and the turn must be in hours. Sort of the "apples and oranges" syndrome.

A large body of men marches at about 20 miles per day. So let's use the formula to determine raw movement when our scale is 1:1,000,000 and game turns represent two days.

$$\frac{20 \text{ mi/day} \times 2 \text{ days/turn}}{10 \text{ mi/hex}} = 4 \text{ hex/turn}$$

The miles and days cancel out, which is why they must be identical for all parts of the equation, leaving the answer in hexes per turn.

Now note that the only part of this equation that is constant is the speed of the unit. That is, men, horses, vehicles, spaceships, and dragons presumably have some referent speed that is beyond the whim of the designer. However, the designer can fiddle with the length of the turn and the scale of the hex to manipulate the outcome. For instance, by changing the turns in our example to represent four days, we change the raw movement to eight hexes per turn.

This brings us to a couple of rules about movement in game design. First, the average unit should be able to move at least four hexes per turn. This "rule of four" is average, unaffected by weather, terrain, and the enemy. Since we play in alternating turns, the average unit should have enough scope in a single turn to actually hurt the other guy if circumstances warrant. An average of two hexes per turn gives the opposing player too much advantage in "reaction time." When Avalon Hill re-made their original *Gettysburg* into a hex format, the average movement was two hexes, and the game took on the viscosity of molasses.

The second rule is at the other end of the spectrum. If the average unit can move from one end of the map to the other in the same turn, then movement is set too high.

Both of these rules emphasize the average unit. The most interesting games have some units that move slow, some that move average, and some that move fast. The player is then faced with the problem of which units to mix at which points on the map.

Actual vs. Potential Movement

Especially in historical gaming, there is always a minor controversy brewing over "actual" vs. "potential" in terms of movement and combat. For a variety of reasons (leadership, training, tactical doctrine, equipment maintenance, etc.) there are many instances where units had the potential to exceed their actual, historical performance.

In determining movement, then, the designer is faced with a problem. Using the historical unit speed automatically closes off one facet of the simulation, eliminates one "what if." Using the idealized potential speed negates all of the factors which led to the historical performance in the first place.

My own inclination is to keep the movement as close to raw movement as possible, and then add profuse penalties to get the average movement down close to historical. Some would agree that this approach is an unnecessary complication. After all, if the net effect is the same, why not simply "factor" it into the stated movement allowance? It's a good

point, and the final determination rests with how complex a game is intended. The simplified game will be more predictable, get "worked out" sooner. The complex version will have more playing time, because there will always be the chance, under exactly the right circumstances, that some poor little unit might be able to exercise its potential movement and tip the game.

Trends in Movement

In the old days, movement was set in hexes. If the number on the counter was "4," then you moved four hexes. For major terrain barriers, you stopped adjacent to the barrier, and then could move one hex per turn through it.

Today we've shifted more to a concept of "movement point costs per hex." The "4" is still on the counter, but the "cost" (how many of that "4" you use when you enter a hex) is determined by a separate movement table. This technique allows for much more sophistication in assessing movement costs. For example, the chart might make a distinction between tracked and wheeled vehicles, horse-drawn vehicles, mounted troops, and ground troops. Each type of unit would be charged a different number of movement points to enter a hex.

The drawback, of course, is that it adds one more chart to the game. And, again, it depends on the complexity level intended.

Another trend, more recent, is to translate movement back into time for design and play purposes. For example, if my turns are seven days, and my average unit moves seven hexes, then we can roughly say that each hex moved represents one day. If it takes a large body of troops two days to deploy for a battle, then we can add two movement points as the "cost" for initiating an attack. This design development is a radical departure from the old days when a unit could arrive at the end of a full march and immediately do battle. The effect has been to slow the pace of the game to more realistic progressions.

With all of these penalties on movement, there has been a tendency to increase the movement factors (through a manipulation of the turn scale). The upper limits used to be about "5." Now we see movement allowances of "20," and up to "60" in things like *Panzerarmee Afrika*. Part of this is also explained by some of the "big," multi-map games. Movement factors of "16" are a lot less threatening when you are playing on four 22" x 35" mapsheets. And, of course, with the various penalties, very few units ever have the opportunity to turn that "16" into 16 actual hexes.

Another influence on movement has been the play sequence. It was simple back when one movement phase and one combat phase for each player resulted in one turn. Now we see instances where players will move and fight three times each, then a game turn passes. Here, although the turn is stated as a week, or whatever, the play sequence is actually breaking the turn into little two-day "impulses," and the movement reflects the fact. The purpose, of course, is to increase the "reaction" possibilities for the opposing player, which is necessitated by the large movement allowances. So, ironically, we've come the full circle – back to "5" in some cases.

Counter Density

We said earlier that level of play and map scale move in tandem. These two items also affect movement in a more indirect fashion, via counter density. Big movement factors aren't any good of you don't have anyplace to move, i.e., if there are scads and scads of counters choking up the map. For example, in our Battle of the Bulge game, an operational level of play would put about three times as many counters on the same map as a strategic level of play. There would be a solid line of stacks knee-deep across the board. In some cases, a lot of counters on a small map might be interesting. When looking at a high counter density, some adjustments must be made for movement. Otherwise you have the World War I trenches all over again.

One approach is manipulation of zones of control (ZOC) as they impact movement. For example, in our Bulge game, if the basic unit was a regiment, and the hex size was 30 mi., then we might say that units could move "through" one another without movement penalties. (Actually, the one unit is moving through a gap that the holding unit, because of its size, can't effectively defend.) That is, a single regiment simply has no ZOC for purposes of inhibiting movement.

The trend is away from high density games, but a careful analysis of what the ZOC really represents would allow for a high density game that didn't stagnate on the first turn. (Avalon Hill's *Blitzkrieg* is a classic example of a high density game that doesn't work.)

The more common control on density is to establish a correlation between the hex scale and the actual capabilities of the average unit. For example, if the most common unit is a division, and the doctrine says that a division can hold a 20 mi. extended front in a pinch, then there is a strong presumption to look for a scale of about 20 mi. per hex. Normally, if there is a good correlation between the unit's capabilities and the scale, the movement and density problems will take care of themselves.

Summing Up

The simple fact is that during the course of a game, units move much more than they fight. A botched up combat system is a serious matter, but a botched up movement system is a disaster. The effects will permeate every turn. Also, there is much less excuse for a bad movement system; in some ways the selection of the map and turn scale is the most objective decision made in the whole game development process. It certainly requires less "intuition" or "judgement" than the incantations needed for a "morale factor" or even the CRT.

Just because the criteria are more precise, however, does not mean that the decisions are less important. When you get to the end of a game design, it's a lot easier to change a result on the CRT than it is to re-draw the map.

Next: Terrain and Other Effects on Movement

EMPYREAN CHALLENGE

EMPYREAN . . . is defined as "the highest heavens". Control of a star cluster comprising 100 solar systems and 500 planets is the goal of this 150-player hidden-movement strategic science fiction game. For free details, send SASE to SUPERIOR SIMULATIONS, 524 Franklin Park Circle, Dept. SG1, Boise, ID 83709.

Featured Review:

Adventures in Fantasy

by Ronald Pehr

David L. Arneson was the co-creator of the original *Dungeons & Dragons*. In this new game he avowedly attempts to present fantasy role playing, for novices and old hands, in a coherent format deliberately designed to allow expansion by future supplements. Had he and co-designer Richard Snider convinced Excalibre Games, Inc. to publish this game before 1979, it might have been a rival for D&D. Today, it is too little for too much money.

ADVENTURES IN FANTASY consists of three 9" x 11½" rule books, three separate sheets containing combat and encounter charts, and a twenty-sided die. *The Book of Adventure*, 57 pages printed in lovely blue type, describes how to set up, equip, and train characters. It gives samples of undergrounds/wildernesses, and explains movement, combat, and experience. *The Book of Faerry and Magic* is 49 pages typed in green. Parameters for magic users are given, spells are listed and described, instructions are provided for sorcerous combat and permanent works of magic. Distinguished from standard magic are the runes and songs of the faerry races. These elves, dwarves, trolls, goblins, and faerries are also described here. *The Book of Creatures and Treasure* is just that, in 49 pages in red print. Each creature is well described and assigned a body type, speed, hit dice (as in D&D), and average hit points. Dragons receive special treatment, the most elaborate set of specs ever: form, IQ, greed, personality, interests are quantified along with the usual size, age, and a simple but elegant rule for fiery breath (1/10th dragon's size is % of an instant kill within the cone of flame, then save vs. magic or die anyway. Dragons are lethal!).

Characters always start the game in the usual way: rolling dice for basics of strength, dexterity, intelligence, charisma, health, and stamina. The last is labelled an option, yet is a vital part of figuring hit points. Humanoids almost always have enough hits to survive several blows, which do not increase as the character advances in experience levels. However, basic rolls are on percentile dice and since many of the performances by the characters consist of checking success by rolling within the basic % for that type of feat, a low roll in a basic can be catastrophic. Special status and age determine liklihood of starting the game with gold and education.

Education is very explicit. However, a need to acquire skills you didn't start with means the character must be withdrawn for many game months to study. Encumberance rules are well integrated. There are some useful hints for populating a dungeon and a long dissertation, with numerous charts, on evasion and searching in different terrains.

Combat is unique in that the basic criterion is body type of defender cross-indexed against that of attacker (e.g. human vs. snake, reptile vs. lion) and modified for size, dexterity, and experience level. All weapons do only a six-sided die of damage. Armor is considered an option, a standard % given for each type to reduce or avoid damage on a hit.

Magic uses "magic points" which are allotted by intelligence and experience level. Saving throws compare the magic points in a spell to a basic % modified by attacker's and defender's level. The rules provide for spell alignments of Law/Neutrality/Chaos without really defining them. There's the standard laundry list of spells, aligned, as well as the runes and songs of Faerry, and a section on mage vs. mage sorcerous combat which resembles psionic combat in D&D.

When all is said and done, ADVENTURES IN FANTASY doesn't live up to its promise and potential. There are too many places where we are told that its only the basic game and the extant rules will suffice until the reader acquires whatever supplements are to be. It is appreciated that the game was designed to absorb later supplements without clashing (unlike D&D). It is *not* appreciated that the game is seemingly incomplete without these later supplements.

The organization isn't really much better than the original D&D; there is too much scattering of charts and details on combat and magic. The monsters and treasure are well described, but not particularly original. (I think it might be argued that the monsters aren't supposed to be "original", they're supposed to represent myths and legends. But that doesn't always go over well in a game format.) The combat system is interesting but neither more realistic nor playable than in other games. The magic system has a lot of possibility, aside from its unique treatment of dragons, but possibilities aren't enough at this stage of the gaming hobby. A game must be evaluated on what it is, not what a clever player can do with it or what it can someday become after numerous supplements.

This game doesn't seem to know what it wants to be. It offers little to the experienced gamer that hasn't already been explored in other games. As a basic game it is far too expensive and some of the concepts simply aren't well enough defined (e.g. alignment, tactical movement on a "board," mechanics of underground exploration).

ADVENTURES IN FANTASY doesn't have the stunning wealth of detail in *Advanced D&D* or *Chivalry & Sorcery*, the organization and tight background of *Runequest*, or the clear flow, excitement, and playability of *The Fantasy Trip*.

It isn't a bad game, not at all, it just doesn't do anything remarkable to justify a $25 pricetag, particularly when it proclaims itself to be only a basic game upon which intricate, fascinating complexities will be built. Needless to say, that will cost more money. We've already got a complexity, in *Advanced D&D* which costs $35, but has lots of explanations, details, and, most especially, charts and tables galore. That may not be everybody's cup of Panacea Juice, but it certainly is selling out there in consumerland.

D&D might have "contradictions and confusions" as Mr. Arneson points out on page 1 of ADVENTURES IN FANTASY, and he may be correct that "Any person without the aid of an experienced player was hard pressed to even begin to gain an understanding of the rules . . ." However, we now have other games which aren't full of confusion, offer some excellent role-playing, can be handled by beginners, and don't cost $25!

CAPSULE REVIEWS

THE SPACE GAMER reviews board games, role-playing games, computer games, video games, and game supplements. We review play-by-mail games if a reviewer is enrolled. We will review any science fiction or fantasy game if the publisher supplies a copy. We do not guarantee reviews of historical wargames. TSG may publish a review of a game we are not sent – IF a reader submits a review.

The staff will make reasonable efforts to check reviews for factual accuracy, but opinions expressed by reviewers are not necessarily those of the magazine. For information on writing reviews for TSG, see "Writing Reviews for THE SPACE GAMER" further on in this section.

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THE BEAST LORD (Yaquinto); $15.00. Designed by Mike S. Matheny. Two four-color 21½" x 27½" mapsheets, 640 extra-thick die-cut counters, 20-page 8½" x 11" rulebook, 12 War Council Objective cards, 4 cardboard screens, 4 counter set-up sheets, 2 dice, plastic storage tray. For 2-4 players; playing time 1-3 hours. Published 1979.

THE BEAST LORD is a fantasy game set in the valley of Cym Bel Eanon, which is dwelt in and fought over by elves, goblins, and men. Enter the Beast Lord, an age-old being known only in legend whose one desire is to destroy all evil in an effort to find good, followed by his horde of "innocent" creatures eager for a repeat of the victories of old. What follows is a four-way battle for control of the valley.

This game has many strong features, such as a "near" hidden movement system (where many counters on the set-up sheet are represented by one counter on the map; some of the board counters can be dummies), random selection of player victory point objectives, a well-developed magic system, and some excellent optional rules for spies (who wander about committing sabotage and assassinations), the Dragon, the Great Sword (lost by the Beast Lord long ago and inhabited by his spirit), special cases in combat, and the devious, open-ended rule for "diplomacy." Most of the optional rules should be used. Another good feature is the Tactical Game, which adds a great deal to the simple combat system of the Strategic Game, giving leaders, symbols, archers, and magic weapons more influence, as well as adding morale rules.

All of this is great once you begin play, but getting it all from the rules is painful and detracts from the enjoyability of the game. The rules are not always in logical order, have several confusing passages with mechanical errors or contradictions, and leave out some important explanations. At times rules must be made up. A rewrite of the rules would improve this game greatly.

If you don't mind wading through poorly written rules and making up some of your own superficial ones, then this game could be fun and entertaining for any fantasy board game addict. Recommended.

–Stephen Carl

BERLIN '85 (SPI); $12.00. Designed by James F. Dunnigan; 22 x 32 map, 200 die-cut counters, rules folder. Two players; 2-4 hours. Published March 1980.

In this near-future game, the allied forces in Berlin, consisting of French, British, US, and West Berlin Police, are besieged by Russian/Warsaw Pact units in a battle of time and attrition. The sequence of play is designed around a simple movement/combat system. Unit strengths are unknown until combat, with the exception of artillery. The special features of the game include the use of paratroops, a multi-result "Honors of War" table, and several interesting scenarios.

The major strength of BERLIN '85 lies in the subject of the game itself. It is hard to imagine an experienced player who could resist the chance to lead the beleagured forces inside West Berlin to victory. The Russian side is also appealing as it provides a dramatic race against time. It is obvious that a great deal of research went into the development of the game. Mapboard graphics are excellent and the rules are clear. As usual, SPI has put together an impressive package.

However, the game does not live up to the packaging. Serious flaws develop in the course of play. First, there is not enough variation in the Soviet forces. It is one thing to use an untried unit system, but it is quite another to use an untried unit system with negligible deviations from the norm. In addition, the allies have so few units that it takes only one game for the allied player to memorize all the strength factors of his units. The game is plagued with over-generalizations, such as the fire storm which destroys any unit in an oil tank hex if fired upon. The combat results table coupled with the advance after combat rules keep the allied forces from ever making a serious counterattack. The zone of control rules add to this dilemma, as they force the allied player to attack at terrible odds.

All in all, BERLIN '85 is a game with many problems, but ultimately worth purchasing. An experienced player will recognize the faults in the game mechanics and change them to make a more balanced, exciting game. This is not a game for beginners, as they will not be able to adjust to the grossly unbalanced system. It is obvious that in BERLIN '85, it is the subject and not the game that is "the thing."

–Kristan J. Wheaton

DOUBLE STAR (GDW); $9.98. Designed by Marc Miller. The game has a very sharp box cover by well-known artist Steve Fabian. 480 counters, 8-page 8½" x 11" rulebook, two pages of charts. Two players; playing time 1-2 hours. Published 1979.

DOUBLE STAR in many areas uses the same type of counters that were first used in GDW's fantastic *Imperium*. DS appears to be in the same vein as *Imperium*, fast, hard-hitting space warfare.

In playing DS, you get the feel of commanding a space fleet coming in for the kill. The use of tactical formations to enhance your position gives the feeling that this is not just another exercise in paper science fiction. DS is a logical follow-up to GDW's *Triplanetary*. DS uses an orbital track system to move the planets around their stars. This system is not unlike the planet movement system SPI used in *Battlefleet Mars*. DS also has a great little twist that I've read in so many grade-B SF stories. The attacker can move a moon from its orbit and launch it through space to be used as a missile against the defender's planet.

My only complaint about DS is while the Chinese and Islamic cultures are trying to destroy each other . . . what is the rest of the galaxy doing? Just for fun, why not add some of the forces from a nearby star system, or some of Earth's Star Fleet?

Now as the review is coming to an end, Steve wants me to tell if I enjoyed DOUBLE STAR . . . . YES . . . . Go out and get it. This one of the most fun games that I've played in a while. Not to mention that it is a good simulation, too. What more could I ask for?

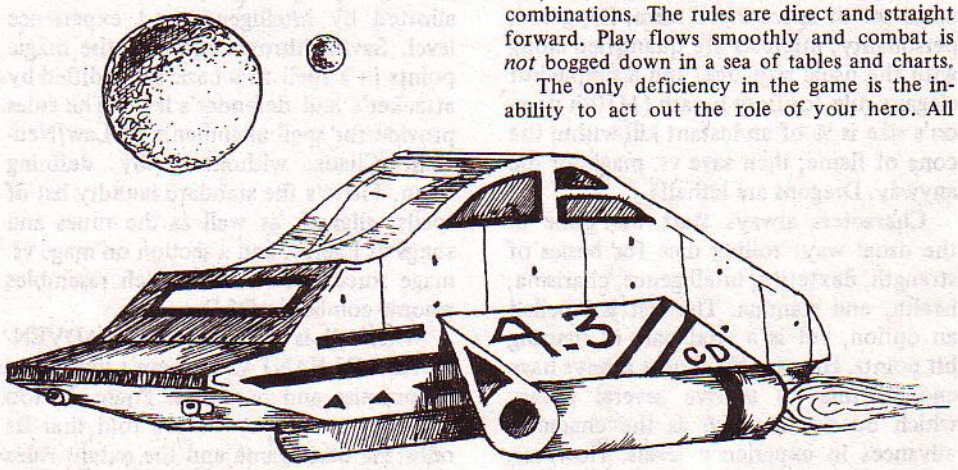
–Robert G. F. Marrinan

HERO (Yaquinto); $7.00. Designed by Michael S. Matheny. An "album" game with one 12-page 8½" x 11" booklet. 24" x 12" map. 150 die-cut counters, two zip-lock bags, and three hero set-up sheets. Two or three players; average playing time one or two hours. Published 1980.

HERO is a fast-playing, exciting adventure game set in the twisting maze of an underground catacomb. Up to three heroes must venture individually through the labyrinth, winning riches and glory. If you live till the end, you might even gain the hand of Alysa, the stunning, voluptuous daughter of the most powerful wizard in the land.

Players design their own heroes from a fixed number of points on re-usable set-up sheets. Talents include Intelligence, Physical Appearance, Class, Strength, Luck, Hits, and Weapons Proficiency. Your hero can be super-strong but have the intelligence of minerally deficient dirt, or could be one of the other numerous combinations. The rules are direct and straight forward. Play flows smoothly and combat is *not* bogged down in a sea of tables and charts.

The only deficiency in the game is the inability to act out the role of your hero. All



heros are heroic – no other options.

HERO has very high-quality components. It's a relaxing change from other, involved, complicated fantasy adventure games, and for $7.00 it's a great buy!

–Paul Manz

WAR OF THE SKY CITIES (Fantasy Games Unlimited); $4.50. Designed by Bob Read, 27-page 8½" x 11" rulebook, 8¼" x 10¼" battlechart, two 8¼" x 10¼" uncut counter sheets on thin cardboard. Two players; playing time varies. Published 1979.

Human and mutant survivors of a post-holocaust world take to the air to do battle in huge flying cities in this table-top game. The title is misleading, since the game is tactical rather than strategic in nature. Movement is a simple two-dimensional si-move system. Combat is also simultaneous with missiles, lasers, and tractor beams inflicting damage points on defending armor. The extent and exact location of damage is determined by die roll. Optional rules cover hidden movement, fighters, boarding parties, and designing your own "cities." The rules are straight forward, although there are some holes the players must cover themselves. (I never did figure out the function of supply cities.)

The scenarios vary from single city combat to multi-unit battles. The orders of battle were reminiscent of James Blish/*Cities in Flight* with counters called Nuork (New York), Moscow, and even Ulan Bator.

Unfortunately, as you read the rules it becomes clear that this is really another game of starship combat. The units are referred to as large, medium, and small cities, and capitals but function as battlecruisers, star cruisers, and scouts and flagships. This becomes obvious during the play of the game. The concept of flying cities appears to have been tacked onto an ordinary game of space combat as an afterthought, and it shows.

If you are a fan of tactical space combat and want a quick, simple game, this might be worth a look. But as a game of sky cities, it just doesn't fly.

–J. S. Thomas

STARFIRE (Task Force Games); $3.95. Designed by Stephen V. Cole. Softpack, with 24-page 8½" x 5½" rulebook, 16½" x 21¼" mapsheet, 108 die-cut counters; Two or three players; ½ hour to 2 hours. Published 1979.

STARFIRE is a game of combat between large space fleets. Three spacefaring races are represented: Terran, Khanate and Ophiuchi. Players warp their ships into a system, close to battle range, and then blow each other to smithereens – really. This is a type of game where, if both players start with 15 ships, the winner will limp away with three or four scarred survivors. A good variety of ships are included, from escorts to superdreadnoughts (but no regular dreadnoughts!?). The rulebook describes 20 ship systems, including seven weapons. Combat is very simple. Accuracy and damage depend on range, and one weapon hit destroys one ship system. A ship is destroyed when it has no systems left. Some weapons, like force beams and charged particle beams, can destroy up to five systems with one hit at close range.

It all means STARFIRE is simple, fast and bloody. Its most attractive feature, though, is the ease with which it can be adapted to a campaign game. No formal campaign is included, but the final rules section covers shipbuilding costs, technology levels, repairing damaged or

WRITING REVIEWS FOR THE SPACE GAMER

Capsule Reviews

Most of the reviews we print will be "capsule" reviews – 400 words or less. We pay $5 for each capsule review accepted. We want to run a review for EVERY new sf or fantasy game or supplement. During 1980, we'll also accept reviews of older games.

Each capsule review should be five paragraphs long, and contain:

(1) Basic information. Present these facts, in this order: Name of the game; publisher; price; designer. (If applicable: "supplement to ———," "companion to ———," or similar note.) Format: list of components, with sizes of maps and rulebooks, number of counters, etc. Number of players; playing time; publication date.

(2) General description of the game: background, the sides, course of play, special features, etc.

(3) Strong points. Discuss what is good about the game; in every game; there IS something worthwhile. Don't try to be Pollyanna – just point out the game's successes.

(4) Weak points. Every game has its problems, too. If the only faults you can find are minor ones, say so. If the game is fatally flawed, come right out and SAY SO. If you can phrase your criticisms as suggestions for improvement, do so.

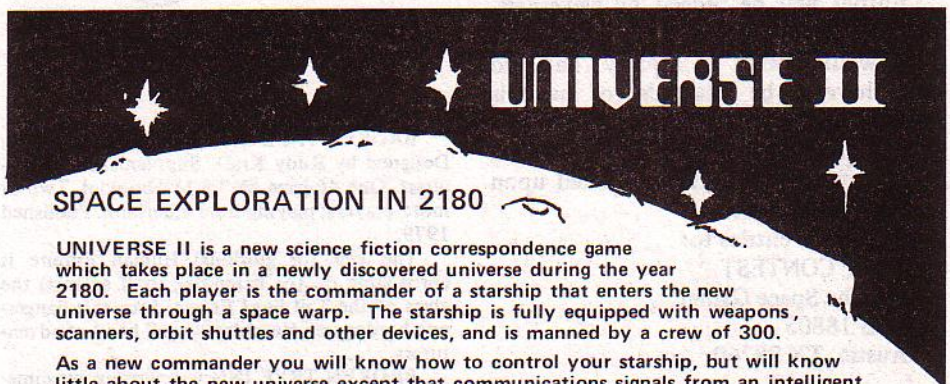
(5) Summation: your overall opinion of the game. Who should and should not buy it, and why.

All reviews must be signed; the reviewer's name WILL be printed. No game may be reviewed by its designer or by an employee of the publisher. (Designer's articles are welcome, but must be billed as such!) Final note: If you can write a complete review in less than the full 400 words, by all means do so.

This review format is designed to encourage fairness and to give the reader enough information to let him decide whether he wants to buy that game. Keep that in mind when you write. This is a short review, NOT a complete analysis. For those who want to write longer reviews, each issue will have one or two –

Featured Reviews

These will be game reviews 1,000 to 2,000 words long. They should contain *all the above information*, plus whatever else the reviewer wants to say. They may be written in any format. A featured review may cover either a new game or one that has been on the market for some time. If TSG has not already published a capsule review, write one, separately, and submit it at the same time. We may even use both.



UNIVERSE II is a new science fiction correspondence game which takes place in a newly discovered universe during the year 2180. Each player is the commander of a starship that enters the new universe through a space warp. The starship is fully equipped with weapons, scanners, orbit shuttles and other devices, and is manned by a crew of 300.

As a new commander you will know how to control your starship, but will know little about the new universe except that communications signals from an intelligent life form have been received. Success in achieving the goals you set will depend on your ability to analyze information, plan your actions and control your forces in a universe that offers an infinite range of choices.

The game format allows participation to be relatively simple or as complex as you desire. Interaction between players is encouraged. Turns are processed as they are received so that several turns per month are possible. The entry fee is $4.00, which covers the assignment of a starship and the rules booklet. Thereafter, turns are $2.00 each. If dissatisfied after the first turn, you may return the rules booklet for a full refund. UNIVERSE II began in the Fall of 1979 and is designed to accomodate entry at any time.

This is an opportunity for the adventurous to explore, colonize and perhaps conquer a new universe. Your starship assignment will be made as soon as you send your name, address and entry fee to:

CLEMENS & ASSOCIATES, INC. • P.O. BOX 18287 • IRVINE, CA. 92713

captured ships, and keeping ships supplied when operating away from base. Good stuff!

Unfortunately, STARFIRE's movement rules make hash out of the laws of physics. In designing a simple game TFG overlooked the effects of inertia and momentum in a zero-gravity zero-drag environment. Ships magically stop moving when their engines are destroyed, and having lots of engines increases a ship's top speed. At first, I thought I had picked up a WWII naval game by mistake. In addition, large fleets of small, cheap escorts have an advantage over small fleets of large, expensive, heavily-armed ships. A player can build 10 to 15 escorts for the price of one battleship, and at close range the smaller ships will cut the larger one to pieces.

If you're looking for detail and realism, you won't find it here. If you enjoy maneuvering massive fleets into high-technology slaughter and don't mind an extremely simplistic treatment of space combat, you'll like STARFIRE.

–Steve Winter

STAR TREK: ADVENTURE GAMING IN THE FINAL FRONTIER (Heritage); $5.95. Designed by Michael Scott. 36 pages, 8½" x 11" softcover. First published 1978.

Based on the same principles as D&D ans similar games. STAR TREK adapts the television series to a role-playing game format. Players can become the major characters from the series, Klingons, Romulans, or members of other alien races in *Star Trek*. Tables are also provided with weapons from the twenty-third century, as well as modern and ancient weapons. As with most role-playing games, STAR TREK can be played simply with character sheets, or with a collection of figures available from Heritage.

The guidebook covers most of the aliens and devices mentioned in both the live action and animated series. Psionic (mental) powers such as telekinesis and the Vulcan Mind Touch are covered, with tables for the use of each. Both basic and advanced games are covered, with sample scenarios of each.

Unfortunately, the game does not go into enough detail on several of the devices vital to the game. More attention should have been paid to defining the exact abilities of the tricorders, phasers, and the various medical and engineering devices. This can be easily remedied by the Mission Master keeping a *Starfleet Technical Manual* and *Star Trek Concordance* at hand. That is not the worst problem, however. There is no way, that I could find, to advance in the game. A character who starts as an ensign stays an ensign. A good Mission Master could design an experience system, but he shouldn't have to.

The game is fair, but only recommended to *Star Trek* fans with a background in role-playing games. Both are necessary for a complete understanding and appreciation of the game.

–Jerry Conner

CONTEST

Joller-An listened at the door. He heard nothing. Cautiously, he turned the knob. The door opened and he stepped inside.

He never knew what hit him . . .

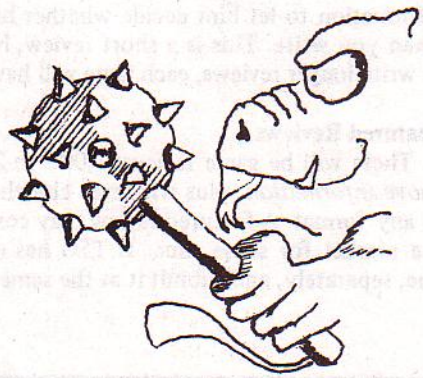
This month's contest is primarily for the dungeon-builders among you. To win, just do what you do every week. Invent a trap. A good one.

Entries will be judged on cleverness, practicality, and the amount of distress they would inflict on a party. They do NOT have to be fatal. Use of magic is acceptable, as long as the magic is very simple . . . but traps that operate without magic of any kind will be looked upon with greatest favor.

Send your entries to:
TRAP CONTEST
c/o The Space Gamer
POB 18805
Austin, TX 78760

* * *

All entries become the property of TSG. The winning entry will appear in TSG; the winner will receive a 12-issue subscription. Second prize: 6 issues. Second-place and runners-up may also be published if space allows. We reserve the right to award no prizes if no entries of publishable quality are received. Entries must be postmarked no later that August 15, 1980.



SUPPLEMENTS

BROKEN TREE INN (Judges Guild); $4.00. Designed by Rudy Kraft. Supplement to *Runequest*. One 46-page 8½" x 11" booklet. Two or more players; playing time indefinite. Published 1979.

The evil (or glorious) Human Empire is enroaching on (or defending itself against) the elves of the Tall Seed Forest. Into this dangerous border area stumbles a small band of adventurers . . . .

BROKEN TREE INN was written by someone who loved his subject. He describes the area and its inhabitants in affectionate detail. Three scenarios are provided. Any human characters may participate, from novice to near-rune lord.

Unfortunately the designer spends a lot of time giving elaborate histories and details which give the game more depth than variety. The game master may wish to spice things up, for example, by changing the encounter table to allow for monsters besides humanoids and animals.

BROKEN TREE INN will work for almost any GM, but it could be a dull adventure in the hands of a novice. At $4.00, it is a bargain.

–Forrest Johnson

ESCAPE FROM ASTIGAR'S LAIR (Judges Guild); $2.00. Designed by Allen V. Pruehs and Ree Moorhead Pruehs. Supplement to *Advanced D&D*. 16-page 8½" x 11" booklet. For three players; playing time one hour. Published 1980.

ESCAPE FROM ASTIGAR'S LAIR is a module designed for tournament use, but it can be played out of that setting if one so desires. Players are given sixty minutes to escape from the halls of a bard, Egad, before he destroys them for following him in. Two characters are provided: a druid and a ranger. Their characteristics are given in full in the back. The Dungeon Master awards points or subtracts them for various feats performed or blunders done.

I wish all the modules JG published were as well-written and as fun to play as is ESCAPE FROM ASTIGAR'S LAIR. Play moves quickly enough that the characters do not have time to sit and wonder how to resolve something, they must get in there and *do* it. In this respect, play simulates real happenings in such a situation. How much time would you want to take to figure out how to get rid of a water weird if you had used up half of your sixty minutes to get to that messy situation in the first place? It is suggested that the DM use a timing system, for it is with this that the module was designed to work.

Aside from the arbitrary lessenings of the powers of some spells to almost useless, and allowing only a few options in given situations, there is not much wrong with the supplement. There are typos, as in almost any book of this kind, but they can be borne in the face of such good work.

Well worth the small price. The design can be built upon for future uses, or changed in small ways for the individual needs of the players. If you like the AD&D system, this is a *good* way in which to use it.

Elisabeth Barrington

EXPEDITION TO THE BARRIER PEAKS, (TSR); $8.00. Designed by Gary Gygax. Adventure supplement to *Advanced Dungeons and Dragons*. One 32-page 8½" x 11" booklet, one 36-page 8½" x 11" illustration booklet, and six 8½" x 11" maps. Two or more players; playing time variable. Published 1980.

Characters go into the mountains to investigate the source of strange beasts which have been wreaking havoc throughout the land. There are fifteen pre-set characters, and in the course of the adventure they encounter many strange beasts and discover even stranger artifacts.

EXPEDITION is very enjoyable for experienced players, but those who are not will find themselves far out of their league. It successfully combines fantasy with SF, and the system utilized to discover how to use an artifact is great. The monsters are unique and dangerous, and the illustrations of them are particularly unusual.

The only really irritating factor in the design of this module is the lack of attention to detail throughout most of it. It affects play very little, but the DM has to improvise madly when good players carefully search rooms.

All in all, EXPEDITION is well worth the high price paid for it. It is extremely fun to play, and the illustration book makes it even more so. This is one of the best modules TSR has published; I would place it second only to *White Plume Mountain*. Highly recommended to those who enjoy fantasy and SF role-playing in general, and to fans of AD&D and *Metamorphosis Alpha* in particular.

–Tim Byrd

FORTRESS ELLENDAR (Fantasy Productions Inc.); $5.00. Designed by Jeffrey C. Dillow; Adventure scenario for *High Fantasy*; 16-page 8½" x 11" rulebook and 11" x 17" black and white map. Two or more players; 1-2 hours. Published 1979.

Players are being sent to retake Fortress Ellendar from the evil Dark Lord. He's too strong to beat, but the players can slip into the fort, fight a few guards, and free a demon prince who will then do in the Dark Lord and his minions.

A good background is given, in the guise of the original owner of the fort telling the players about it. The essence of the adventure is that they are given a spell for freeing the demon prince and they must find out exactly how the spell works by reciting certain portions at certain locations. It creates an exciting, interesting adventure. Fighting is quite secondary to the accomplishment of the mission; if anything the players avoid it in favor of figuring out when, and where, to recite the spell. The adventure succeeds because there's a definite goal, definite means to achieve it, and fascinating obstacles.

The players' map is artistic but confusing; players simply don't know what they're looking at and the hexes are too small to mount miniature figures. Some of the clues are obscure and failure to understand them brings swift death. Failure to include a skill level for those *High Fantasy* creatures unique to FORTRESS ELLENDAR leaves players unable to determine whether they've won experience points by fighting, and although the rules say first plane characters can handle the adventure, they usually aren't powerful enough to survive the first few encounters.

The good outweighs the bad, though. FORTRESS ELLENDAR is a worthwhile adventure. My main quibble would be the price. When an adventure scenario for *Dungeons & Dragons* costs less than 50% more but is five times as large, FORTRESS ELLENDAR doesn't seem to have a great amount of play for the money.

–Ronald Pehr

MODRON (Judges Guild); $3.50. Designed by Bob Bledsaw and Gary Adams; supplement to D&D. 16-page 8½" x 11" booklet, 11" x 17" terrain map, 8½" x 11" city map. For 3-8 players (two judges); playing time 1-4 hours. Published 1977.

Modron is a water goddess whose city was somehow preserved in a battle between her worshippers and the worshippers of her rival god, Proteus. Proteus' people's homes were destroyed, but a new city was built on top of the ruins. Explorers in the city can find a myriad of wealth and adventures. Several characters are sketchily described for the players, if they choose to use them.

The graphics on the maps are excellent. The ideas presented in the background are interesting and novel, to some extent. Clarity is the key word in this module. Whatever is described is organized and easy to read.

BUT there is not much described. In each room or place the characters go, the DM must quickly invent a few things to flesh out the descriptions given in the booklet. There are people in the places, and a couple of items, and that is all that is given. No room descriptions, no special traps or interesting things that happen unless you make them up as you go along; just a person or monster and some items. There are some bad typos in the booklet, making things a little hard to figure out at times, but the great organization of the book makes up for that one little problem.

If you are the type of DM who wants the bare minimum provided for your campaign, this is for you. But you might find that $3.50 is a little high a price to pay for descriptions of people. It is fun to play, and there are some new things to find, but I do not think it is worth the price.

–Elisabeth Barrington

MOORGUARD (Fantasy Productions Inc.); $5.00. Designed by Jeffrey C. Dillow. Adventure scenario for *High Fantasy* game rules. One 24-page 8½" x 11" rulebook and 11" x 17" black and white map. Two or more players; 2-4 hours. Published 1980.

Escaping from fierce nomads, players enter a secret shrine made from the bones of an ancient god-king. Players must escape the nomads, find some magic weapons of awesome power known to be in the shrine, and avoid two competing entities who both claim the weapons.

The adventure is well thought out and fun to play. Everything the players encounter fits in with the adventure. There is only an occasional random encounter to spice things up. What makes MOORGUARD especially interesting are the sub-plots: There's a nearby tower – actually a huge winecup from the time of the god-kings – whose inhabitants are in league with the shrine. There's the shrine owner himself – a lich who created the weapons. There's the mysterious Traveller – a ghostly giant who appears at odd intervals exhorting the players to give him the weapons. Then, even if the players find the weapons, and if they get them out, and if they escape pursuit by the nomads, lich-

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No. 24. Black Hole designer's intro; "The Psychology of Wargaming"; Naval Melee; "The Four-Howitzer Defense in Ogre"; variants for Chitin: I, The Creature That Ate Sheboygan, and John Carter of Mars.

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No. 28. 1979 game survey results; Overmen in TFT; A Guide to SF/Fantasy Game Publishers; Task Force Games report; Writers' and Artists' Guides; 7 pages of reviews; Game Design Part 2; Deus ex Machina.

No. 29. Fantasy Trip designer's intro; Painting Fantasy Miniatures; Fantasy and SF game magazines surveyed; Game Design Part 3; more Deus ex Machina; 7 pages of reviews.

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es, and other unpleasant folk, they still must cross the desert to the safety of the castle which may not be all that safe.

The primary problem with the adventure is that the plot limits the freedom of action: players must run toward the shrine to escape the nomads and don't get to explore possibilities. Several shrine inhabitants attack without warning, giving players no chance to interact/role-play. Finally, the given clues do not lead to the weapons, which are almost impossible to find except by luck.

On balance, though, MOORGUARD keeps players happy and involves them in the scenario. If you like the *High Fantasy* rules, you'll consider MOORGUARD a good way to use them.

–Ronald Pehr

RESEARCH STATION GAMMA, *Traveller* Adventure 2 (GDW); $.98. Designed by Marc Miller. Interior illustrations by Cindy Baker and William Keith Jr. One 44-page 6" x 9" booklet. One referee and two to eight players; playing time indefinite. Published 1980.

RESEARCH STATION GAMMA, the newest adventure for GDW's SF role-playing game *Traveller*, gives a group of hardy adventurers stuck on the planet Vanejen the rare opportunity to break into a top-secret Imperial Research Station which is delving into the possibilities of (CLASSIFIED: TOP SECRET). The mission: to rescue the nest-mates of a strange little alien called a Chirper – an alien who offers ancient gold coins as an inducement . . . . The hazards are, as usual, many and challenging; the rewards are varied and . . . well, *rewarding*. Unlike *The Kinunir* (Adventure 1), RESEARCH STATION GAMMA presents only one scenario for the adventurers – but it is a scenario that contains enough variations to keep all but the most hardened *Traveller* veterans busy for a while. And even vets may find they've got their vacc suit-gauntleted hands quite full with this one.

RESEARCH STATION GAMMA is replete with information for the detail-minded referee to dispense to the players as they work – and often grope – their way through the adventure. The research station itself is completely mapped out with plans and room descriptions. Blueprints and stats are given for the Hargrave H-6 Submersible Boat (the primary mode of transportation in the ice-ridden Southern Seas of Vanejen) should the adventuers seek transport aboard such a vessel. Rumors abound and the Library data banks provide a plethora of precise knowledge concerning the planet, pertinent alien and human races, the Imperium and research stations in general. One nice feature is the keying of the encounter tables with those in *Animal Encounters* supplement and *The Journal* No. 3 for those who want even more information. RSG even provides pre-generated characters from which the players may choose if they wish. Most, however, will probably want to roll up their own or use characters from an existing campaign. For best balance, though, refs should limit players to characters from the basic *Traveller* books or, at the very least, prohibit Tech Level 9+ weaponry – especially high energy weapons. A couple of plasma or fusion guns in the hands of over-zealous adventurers can make for a very short and extremely predictable outing.

If there is any weak point to this adventure, it is that it is almost *too* complete in some aspects (the ref even does the "thinking" for the players in one instance), leaving less room for creativity than many referees – and players – might like. An inexperienced ref, however, may find this a godsend. And a truly creative referee will always find room to improvise.

All in all, then, RESEARCH STATION GAMMA has to be considered a worthy addition to the expanding *Traveller* family. All referees – and probably a lot of players, too – should want to add this one to their collections, not only for the rousing adventure, but for the abundance of new information as well.

–William Barton

COMPUTER GAMES

ALIEN INVADERS (Software Exchange); for the TRS-80, 16K Level II tape $9.95, 32K disk $14.95, also available for the Apple II. By Chris Freund. One player only; sound effects with amplifier.

The object of the game (based on a popular arcade game) is to destroy as many alien ships as possible before losing all available bases. The player is given five bases to start with, which he can use one at a time to shoot at targets. The player is able to move the bases across the bottom of the screen beneath the alien ships. The aliens appear in formations of 105 ships in a 15 by 7 block above the player's base. Also, at random intervals, alien mother ships fly across the screen. The aliens move back and forth across the screen, coming lower and lower the longer they remain. The player must continue shooting until all of his bases have been destroyed by alien bombs. The game lasts from five to twenty minutes, depending on the player's skill and luck at survival.

Although the aliens use no special strategy and cannot dodge shots, the fact that there are so many of them and that they shoot back means that the player must pay constant attention. The game continues non-stop until the player loses all of his bases. In a long game, this can become a very grueling and draining experience.

The only flaw is the inability to move and shoot simultaneously. To a practiced player, this can be a drawback. However, this problem is very minor.

This game involves no real strategy, but will provide a great deal of excitement and frustration, depending upon your temperament. If you are an arcade game fan, I highly recommend this game.

–Joseph T. Suchar

AIRRAID; available from Small System Software; $10.00. For the TRS-80 Level I or II, 4K, tape; one player; nine levels of difficulty; each game lasts two to three minutes.

The player's objective is to score points by shooting down planes. The player has a cannon on the bottom of the screen display, and can control the direction in which the cannon points as well as the course of the shots. The planes appear randomly on either side of the screen at various altitudes. Displays at the bottom of the screen keep track of points scored, time left, high score, shots taken, number of planes destroyed, and the number of shots which missed. The player is given ninety units of time, plus bonus time if enough points are scored. The speed of the aircraft and the speed of the passage of a time unit are controlled by the player's selection of level of difficulty.

This game has many sophisticated features which are unusual for computer arcade games. The most elegant feature is that when the player hits a plane, it does not simply disappear, but rather explodes into "wreckage" which descends through the sky. Any other planes which fly into the wreckage are destroyed, and the player scores points for them. Also, when two planes collide, a pilot and parachute appear. The player scores a large bonus if he is able to shoot the parachutist. These two features mean that clever shooting is rewarded.

The one weak point is that due to the way the program was written, the player can enter only one key stroke at a time. This means that one cannot simultaneously adjust the elevation of the gun and fire a shot. In a fast-paced game, this can slow a good player down.

In summation, AIRRAID is the best arcade-type game I have played. As an arcade game it is unsurpassed and I recommend it.

–Joseph T. Suchar

GALACTIC EMPIRE (not to be confused with Powersoft's *Galactic Empires*), published by Automated Simulations; tape $14.95. For the TRS-80 Model I Level II 16K. Program by Douglas Carston. One player; one level of difficulty; playing time over four hours; cannot be saved.

You are the ruler of a world near the center of a small stellar cluster. Your task is to conquer as many worlds as possible in a minimum of time. The game map is in three dimensions, which can be confusing on a two-dimensional screen. Planets vary in population, size, and technological level. The computer keeps track of production and ship movement.

This game has some beautiful detail. Everyone will enjoy the diversity of ship types. The graphics of space travel and the display of an approaching planet are beautiful. The planet-scale ground and air combat is dynamic.

Unfortunately, four hours is just too long for a game that cannot be saved. Once you have developed a strategy, this game can become repetitive. And the program allows some obvious "game-busting" techniques for production and

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combat.

GALACTIC EMPIRE provides hours of play, but they can be frustrating and tedious hours. It is too easy to beat the system, and the game cannot be saved. A mediocre buy.

–J. Mishcon

PIGSKIN (Acorn Software Products); Tape $9.95. For the TRS-80 Model I Level II 16K. Minimal typing skills required. Each game lasts ½-1 hour. Five levels of difficulty.

Sis-boom-bah. It's football time. You see the football field and the field position of the football. A good display of the current state of affairs is displayed along the screen. The ball moves along the screen/field as each play is run. Play against the computer or another player. There are ten offensive plays and six defensive ones.

The game's only real flaw appears while playing another person. The frequency of a big loss (even when the defender is perfectly keyed in on the offensive play) is much rarer than the liklihood of a big gain. Thus punting becomes a rarity and huge scores are normal.

A super game for kids who will love plenty of scoring but probably not the answer for a real lover of football.

–J. Mishcon

SPACE GAMES 3 (CS-3002) by Creative Computing. Tape – $9.95. For the TRS-80 Model I Level II 16K. Four games on tape. Each game lasts ¼ to 1 hour.

Ultratrek is a simplistic *Star Trek* game. One Enterprise versus a galaxy of moronic Klingons. No graphics and no exploration theme. Sweep through the galaxy and blow away Klingons and their bases. Easy for kids to master. One cute feature is the experimental ray which does unpredictable things, but is the only unpredictable thing in the whole game.

Romulan is a guessing game to shoot the sometimes invisible enemy. You may scan to reveal the ships' location, but may not shoot and scan simultaneously. You first scan, then guess where to shoot next move. No graphics and no strategy.

Starwars is a real-time shooting gallery of TIE fighters. OK graphics; this is quite similar to the arcade games of this genre. Moderately tough for kids.

Starlanes is a business game superimposed on a space theme. Big companies take over adjacent small companies. Size determined by the number of stars touched. Players get to buy space based on random draws. Easy for kids.

The under ten set will enjoy these games, but don't be surprised if they soon tire and move on.

–J. Mishcon

STARCRUISER (Strategems Co., P.O. Box 786, Taylor, Mi. 48180); Tape – $10 + $1 postage. For the TRS-80 Level II Model I 16K. Two players only. One level of difficulty. Playing time one hour. Cannot be saved.

Two aggressive solar systems are randomly situated on a map of 41 solar systems. Both aggressors attempt to either force 25 non-aligned planets to ally with them or destroy all their opponent's starcraft. Each player starts with 6 equally potent starships; a few neutral starships may be secured by alliance. Scattered among the distant stars are a few "unusual" systems that include a black hole, hostile aliens, and non-aligned peoples who have special skills in one of three areas. Lastly, there are one and two way warps which can toss ships aimlessly across the void. Movement is from quadrant to quadrant – each quadrant move taking one turn. All movement, combat, and situational changes are mediated by the computer, but maps and counters are provided to allow players to keep track of these elements outside of the computer.

This game's strongest element is its basic concept. Exploration with the threat of combat makes for good space games. The possible rewards of exploration make the outward leap more plausible and desirable. Obviously, the ability to play any game blind is an inherent strength of the computer.

Unfortunately, the game is overwhelmed by flaws. The program is designed so that is is likely your opponent may accidently glimpse part of your "hidden" empire. The "P" command allows you to get complete data on each solar system without sending out a single spaceship. Movement is designed to punish going from star to star in one jump as compared to multiple small jumps. The black hole and hostile aliens both kill instantly whomever visits. There is much that could have been done, e.g. economics, politics, research, production, that just is not there. Most critically, the game seems inadequately playtested – it's almost impossible to destroy all your opponent's starships, and luck seems more likely to determine the winner than skillful play.

A nice try, but the execution is so poor that it will bring to mind all the rip-off wargames moldering in your closet. Why not wait till someone does this properly?

J. Mishcon

STARFLEET ORION (Automated Simulations); $19.95. This package contains one cassette, a twelve-page rulebook, and a battle manual. This two player game can take anywhere from one to six hours to play. Written in 1979, STARFLEET ORION is available for the Apple, Pet, and TRS-80 computers.

This game is a tactical space battle simulation with infinite flexibility. Using the Builder program, the players can create their own scenario or play one of the twelve included. The scenarios can have anywhere from two to eighteen starships. Some set-ups even include planets. The twelve battles included are either taken from science fiction stories, or else they follow the game's story about the wars between the Stellar Union and the Confederation of Orion. The vessels can have lasers, missiles, torpedoes, shields, and tractor/pressor beams. Execution of commands is done simultaneously; you must guess what your adversary will do.

The program has several strong points, the best of which is its versatility. The players can not only vary the number of ships, but they can even design their own ships. Battles can be designed so that one side has an advantage. This is a nice feature if one player is better than another. Other strong points include good graphics and no bugs.

This game has very few weaknesses. The only real problem is that it requires two players. It cannot be played solitaire or with three or more players.

I was quite impressed by STARFLEET ORION. I have seen enough bug-ridden, boring computer games to know when a good one comes along. I highly recommend it in spite of the rather high price.

–Alan Isabelle

TYCOON by David Bohlke. Tape – $7.95. For the TRS-80 Model I Level II 16K. One to four players. Several levels of difficulty. Playing time 1-2 hours.

The gist of the game is to increase your total worth by the effective management of a business to become the first tycoon. You must deal with many of the financial decisions of a large business.

Doubtless the excellent business graphs and displays will thrill every would-be J. Paul Getty. A nicely organized tote sheet of all the income and expenses and the deatils of each separate account makes following the game progress easy.

There are major difficulties which must be overcome to enjoy this game. The first is the complete absence of any hint in the rules what effect any of various changes will have in the different business climates. Do current decisions have any long-term sales effect? You will experiment for many games just to get a handle on how to try to steer the company.

As currently constituted, I'd advise against this game, but a second edition with more complete instructions (and perhaps some non-financial complications for extreme tactics) would be very interesting.

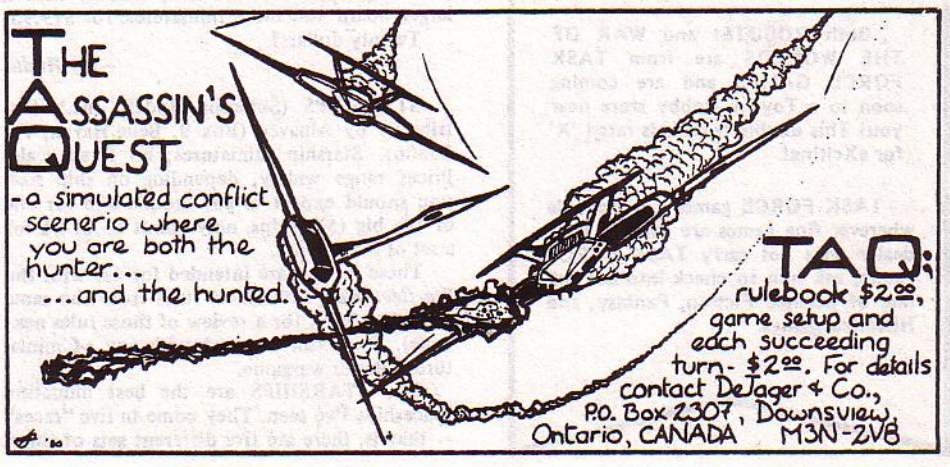
–J. Mishcon

MINIATURES

CRYPT OF THE SORCERER, (Heritage); $14.95. No designer given. Companion to *Caverns of Doom* in the *Dungeon Dwellers* line of the *Paint 'n' Play* series. Boxed, with one 8½" x 11", 2½ color map, 8 lead 35mm miniatures, tray of 10 paint colors, 1 brush, 1 die, 1 8-section tray, 8½" x 11" painting guide, a four-page 8½" x 11" rulebook, and a big styrofoam spacer to make the box bigger. For 1-4 players; playing time 15-30 minutes. Published 1980.

Fifteen dollars?

Billed as "A Complete Hobby Craft Game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BIG DOUBLE FEATURE!

THE ROBOTS

HAVE RETURNED!

ROBOTS!: the game where YOU manufacture your own weapons. ROBOTS!: the game where missile-armed hovercraft trade punches with forty-foot manlike droids bristling with guns, lasers or missiles. ROBOTS!: the game where man returns from the planets to salvage the earth. The victory goes to the player who can salvage the most . . . and survive!

ROBOTS! includes over 100 die-cut counters representing transport modules, weapons modules, and factory ships, which allow players to assemble their own robots. ROBOTS! sells for only $3.95.

MARTIANS

INVADE LONDON!

THE WAR OF THE WORLDS is a tactical level game simulating the Martian attack on London in the late 1800's. The Martian player must destroy as much of London and its environs as possible. The human player must find the right combination among his artillery, cavalry, and infantry units to destroy the Martian invaders. However, every game is different as there is a variable Combat Results Table.

THE WAR OF THE WORLDS includes over 200 die-cut counters, a map of London taken from an 1890's map which features large easy play hexes, and various charts. This boxed game sells for only $9.95.

Both ROBOTS! and WAR OF THE WORLDS are from TASK FORCE GAMES and are coming soon to a Toy or Hobby store near you! This double feature is rated 'X' for eXciting!

TASK FORCE games are available wherever fine games are sold. If your dealer does not carry TASK FORCE games, ask him to check into our full line of Science Fiction, Fantasy, and Historical games.

Kit," this game does have the ultimate minimum equipment for miniatures fantasy gaming. There are four adventurers and four monsters cast in lead, paints and painting tips, and not-quite-trivial scenario.

Fifteen dollars?

The miniatures are reasonably good quality, and the painting instructions are by far the best feature of the game. They explain priming, painting, staining, washing, and finishing, complete with a suggested color scheme for each figure. This guide would be a great help for almost any new gamer.

The game, on the other hand, is almost useless. Three adventurers enter the map, which has six halls, two rooms, and a crypt, and a set of stairs leading to the companion game. They find their way (eventually) to the crypt, hacking orcs, skeletons, and trolls along the way. At the crypt they have a showdown with the Sorcerer, grab his treasure, and fight their way out.

It's actually worth playing.

Once.

Maybe two or three times.

By then, you've done everything possible, and you're repeating yourself.

The rules are simple – each character has a speed, hit points, and fighting strength. To fight, the attacker and defender each roll a die. Attacker's die minus defender's is the number of hit points taken (with appropriate modifiers, of course). Only one character can occupy a square at any time (except for dwarves and halflings). What this means is that if the orc jumped your wizard on the far side of your fighter, the fighter just watches the wizard die, because he can't get past him.

The rules cover some aspects very simply, merely by ignoring reality. If the die roll puts an orc in the middle of your party, that's where he goes, and don't ask where he came from.

The map is mostly grey and white, with green numbers, and has a complete map key – *PRINTED ON THE BACK OF THE MAP.*

Fifteen dollars?

The game's intent is to provide the flavor of fantasy gaming as simply as possible – and it certainly does that. The game itself, with die-cut counters, would make an excellent insert for a magazine or a $1.98 beginning scenario. With two or three dollars' worth of miniatures and a small paint set, this would be a good way to introduce someone to miniature gaming.

It comes down to eight miniatures and two hours worth of gaming – *total*. There's nothing criminal about it except you can get much better for less money. It might be helpful for beginners, but if you're enough of a gamer to be reading *The Space Gamer*, you don't need it.

CRYPT OF THE SORCERER has a companion game, *The Caverns of Doom*, with a larger board and more miniatures, for $19.95.

Twenty dollars?

–Jay Rudin

STARSHIPS (Superior Models, Inc.); Distributed by Alnavco (Box 9, Belle Haven, VA 23306). Starship miniatures; no fixed scale. Prices range widely, depending on ship size; you should expect to pay around $15 for one of the big (5") ships, only about $3 or $4 for a set of 3 tiny ones.

These models are intended for use with the *Starfleet Wars* miniatures rules from the same publisher (look for a review of those rules next issue). They can be used with any s-f miniatures rules or wargame.

The STARSHIPS are the best miniature spaceships I've seen. They come in five "races" – that is, there are five different sets of ships. Each race has, at present, seven classes of ship, ranging from tiny starfighters to enormous "Super Galactic Dreadnoughts." Each race's ships have a distinctive "look," setting them apart from those built by the other races. Without exception, the STARSHIPS are finely detailed, and I haven't seen a bad casting yet.

Some of the designs are original . . . others will look awfully familiar. The whole Terran line looks straight out of *Star Wars*, for instance; other ships mirror *Battlestar: Galactica.* No *Star Trek*, though.

Some of the castings have a brittle "feel" to them. I deliberately mistreated a couple of mine to see if they were really fragile. They're not. It took considerable effort to get one to break. Damage from merely being dropped was nearly invisible.

Highly recommended for space-miniatures fans – especially those who can paint well enough to do justice to the details.

–Steve Jackson

HISTORICAL GAMES

ROMMEL'S PANZERS (Metagaming); $3.95. Designed by Roger Damon. Boxed, one 20-page 4" x 7" rulebook, 126 die-cut counters, one 12" x 14" mapsheet. For 2 players; approximately 30-45 minutes per scenario. Published 1980.

ROMMEL'S PANZERS depicts combat between single tanks and anti-tank guns in the North African desert, 1941-42. North Africa has been described as a "tactician's paradise" since there are no significant terrain features or population centers to affect battlecraft. Despite the relatively small forces involved, the see-saw campaign between the British and the Germans has always been a favorite of World War II students. The Brits kicked the Italians around until the arrival of Erwin Rommel. Rommel's superior tactical sense, supported by a fine German staff system, brought victory after victory over superior British forces. Rommel was finally beaten by Allied material superiority and by his own penchant for over-extending himself.

The map uses abstraced terrain showing roads and color-coded ridges (different color combinations used in different scenarios); scale is 20m/hex. Building counters are used in some scenarios.

Intermediate and advanced rules add provisions for overruns, off-board artillery, and mines. Seven scenarios are given, and there are rules for constructing your own scenarios.

This is Metagaming's first foray into the historical market, and the results are mixed. The play sequence and game mechanics have strong echoes of *Squad Leader* and *PanzerBlitz*: the "to hit" die roll, direction of movement rules, and the CRT. Nothing particularly new or innovative here. The typographical errors in the rules are irritating, but with a little work and close reading, you can eventually figure out what's going on. For example, the sample unit key on the first page has the movement and defense factors reversed; however, the examples in the movement rules will show you the truth.

Tactical gaming was nearly worked to death in the '70's, and with this background it's almost impossible to put out a totally botched-up title. ROMMEL'S PANZERS plays it safe with tried and true systems, no infantry, and no terrain. (The selection of North Africa was very shrewd.) If you don't own any other WWII tactical games, ROMMEL'S PANZERS provides a good introduction to this level of play at a reasonable price.

–Nick Schuessler

LETTERS

The Space Gamer has changed considerably in these past few months, and all for the better, as far as I'm concerned. The new format is excellent! The cover art was striking to say the least, and for the past two issues the interior art has had that intangible, near-impossible CONTINUITY that marks the efforts of a capable editor. BRAVO sir! I was entirely flabbergasted at the amount of information which you managed to cram into a 34-page magazine. I would not hesitate to say that issue no. 28 of *The Space Gamer* contains more information on the Science-Fiction/Fantasy element of the wargaming hobby than any other single document available.

I was somewhat puzzled on the results of the survey under the contents heading. Continuing comic strips rated very low; this is only surprising as long as you ignore the rest of the results, however. The only continuing comic strips that I know of in wargaming are those that have appeared in *The Dragon* and not quite half of your respondents even read the magazine regularly. Even then, *The Dragon* has had problems keeping their strips going in every issue so that I'm sure a number of those who said they read it regularly are not familiar with the comic strips. I would like to suggest that a search be made for a quality strip and if one can be found, give it a shot. I know that when *The Dragon* misses an issue without their strips they get mail wanting to know why from those who are familiar with the strips.

Getting back to the ratings of the games – out of the top ten space tactical games it was quite surprising that no. 1 was unknown to over 2/3 of the readers and three others were unknown to better than 1/3! I think it would be very appropriate to request some reviews of these games so that all the other hobbyists can find out just what we're missing out there! Also, I would like to suggest an extended feedback rating a la SPI and AH just to find out WHY some of these games are great and others are turkeys. For instance, *OGRE* and *G.E.V.* lead the pack in their category, despite mediocre components, while *Elric* drew a 4.7 with the most beautiful components and graphics (the mapboard is LITERALLY suitable for framing!) found virtually anywhere in the field. Obviously, there are trends here which a simple overall rating cannot explain or even justify under comparisons; more in-depth information is required. To this end I would like to suggest killing two birds with one stone. You complain of not having an adequate mailing wrapper (and we all know what a pain perforated inserts are) and including a feedback card would be difficult, I'm sure. Why not try Don Lowry's method? It works great for him and is much more inexpensive than envelopes. He uses a cheap paper wrap-around with mailing information and advertising on the outside, and puts order forms and a feedback sheet on the inside. Look into it, this may be what you're looking for. The only items I think desperately needs changing is the logo on the cover. The title box just doesn't look right. Have you given any thought to running a contest for who could put together the better logo for *The Space Gamer* and then putting up the semi-finalists to a vote of the readership? I think since *The Space Gamer* is now going places that it's time for a change, don't you? *The Space Gamer* has gone from one of the staples of the field to one of its leaders. Don't ever stop looking forward.

Chester E. Hendrix
Gridley, CA

We could use a little comic strip, if it is good and the artist can be relied on to produce it regularly. We just haven't been offered one yet.

We have written to ask for review copies of the games you refer to; we can only hope the companies will respond.

Regret we don't have the staff to process a monthly feedback questionnaire.

As you can see, we have a mailer cover on subscriber copies.

The current logo is no beauty, but it is distinctive and most people seem satisfied with it.

FJ

I would like to offer a few suggestions concerning TSG's fiction. I have observed that all of your stories seem to be based either on games directly, or the situations are those that you might find in an RP game. This seems to have brought about a lack of enough background and/or conflict to hold attention. When considering a story, I think your evaluation should be founded on two questions:

1) Is the story line itself interesting enough?
2) Is the writing good enough?

If you think the first applies, but not the second, send it back for a rewrite. In my opinion, after reviewing your magazine's past fiction, it seems to have been contributed by non-professional writers and if you criticize their work, it can only improve them. And they will certainly have enough time to give it another go. Or, if the story is just not up to your new standards, tell them so. I feel this sort of policy might drop the quantity of fiction a little, but in the longer run, more people will read and appreciate what you do print.

Ronald Shigeta
Salem, OR

Although *The Space Gamer* seems to be thinner, there is no question that any lack of quantity is made up for by the high overall quality of the magazine since the departure from Metagaming.

The remarks in the Game Master column are good and direct. I think that the comment about friendly fire is extremely well handled. The acquisition of distribution by Kalmbach sounds like a good thing, as does the idea of mailing wrappers. Note, however, that *Kilobaud*, a personal computer magazine, seems to delight in gluing the wrapper to the magazine so that the protection of the wrapper is lost on receipt of the magazine/wrapper.

TSG's fiction and artwork has always been quite good. "Distraction Tactic" seems to be adequate demonstration of good taste. I have always enjoyed Paul Jaquays' work, but Denis Loubet's work is clearly on a par with Jaquays'. Fine, keep it up!

The guide on SF/F publishers was interesting. Although I'm sure that some die-hard will say that you should have been tougher on Metagaming, I think that the remarks just about sum up the picture I have. As to SPI's integrity, however, we are miles apart. I have stopped buying from SPI directly because of their repeated errors and delays. It is true that they do finally correct them, but I shouldn't have to trust SPI to correct their mistakes because they sould never have been made. Errors to date include a World War *III* map in a copy of World War *I*, botched counter sheets, lost issues of *S&T* and *Moves*, and refusal to issue the refunds without a series of letters and phone-calls that cost more the order itself was worth. I can now recite SPI's address in my sleep and I figure that maybe next week their phone number will be engraved in my generally poor memory. In short, SPI has done everything possible to lose my confidence in them.

The Deus ex Machina column is excellent. I am working on some support programs for *Ogre* and, possibly, AH's *Tobruk*. Bruce Webster has saved me a great deal of research.

The company report on TFG is a good idea and I'd like to hear about Yaquinto if for no other reason than to find out what warped mind dreamed up the *Panzer* rules.

Game Design leaves me with mixed emotions but I can't say just why. I suspect that there is a tone of condescension that bothers me, but then I'm just a novice at wargaming in general.

The Capsule Reviews were a bit overwhelming; there were sure a lot of them. I agree that *Ares* is a turkey as far as games go, but that the fiction is good. The conclusion that *Ares* might make more sense as a "*Moves*-like" magazine is a good one, it's a shame that SPI probably won't see it that way (and me with $14 invested!). Including reviews of computer programs is a good idea, now if someone will just write something other than a re-hash of *Star Trek* or *Adventure* . . . . Go ahead and publish reviews of historical games if space permits. After all, what is science fiction but history that might be or might have been? As to the narrow-minded individuals who think that history is "junk," there isn't any pat answer but perhaps repeated exposure will bring them to

the conclusion that there's a lot of raw material in the past.

In general, keep up the good work, and keep on trying to get better.

Richard Emerson
Lansdale, Penn.

You will be happy to learn a company report from Yaquinto is in the works.

FJ

I never said D&D (or AD&D) was *confusing.* I merely said it is *complicated.* There are differences. I do not mind a complicated system, as long as it is efficient. By efficient I mean at least somewhat irreducible to simpler, more logical, and more (or at least *as*) interesting systems. A major problem is that people have widely differing views about the meaning of simplicity and complexity. A system may be simpler and more elegant without being less varied or less diverse.

Also, I see no reason to withhold comment on a system because I haven't written my own game system. (I have good reason to comment: I've *seen* a better one.) That is like saying that everyone who has not designed a computer should not gripe when it wipes your disk or crashes (becomes irreversibly dead to all but the old POWER switch).

Comments on other parts of TSG no. 28: I have rarely read a magazine that I have enjoyed cover-to-cover. That issue is one of the few. Though it is comparatively small (in reference to my other myriad subscriptions), it contained the most usable and interesting information. I particularly enjoyed the capsule reviews – keep them up! Mark one vote for the company report . . . I had not really noticed Task Force much until that article. It also adds a feeling of personal contact with the company. I do agree that the physical quality of the TFT advanced modules is a bit low; sloppy is the word. Not that the art is bad, but (though I know this production was rushed at the end) I would've liked to see different art on the three covers. I'm always getting this, "Oh, so you bought three copies of the same game, eh?" or "Let's see *Advanced Melee*. Is this it? No . . . wait, I put it here . . . no, this is ITL" and so on. I would also VERY MUCH like to see the boxed version come out for those of us who want it. I would like some play-aids (though I have gotten my computer to do some stuff).

The fiction was fair, but I do not agree with the idea of the story. Survey results as expected, but I think computers were snubbed there. Other departments were also good. However, I hope you do not get too straight-jacket in editorial policy, as far as humor goes. I do not like the attitude of "I am trying to act like an adult here," or "Let's not have that high-school 'mentality' in these pages." I, for one, appreciate humor.

On the psych pieces: I certainly have nothing against them. I play wargames mainly for the different alternatives that I can try out, the different results. It is always interesting to see how such-and-such battle plan or so-and-so strategy works out against your opponent. I feel that the sex allusion is played up too much. I have no reason to feel that gaming is not in the role of an adult, nor do I care. It is an interesting diversion to run the mind through. If we all played these games *only* for the sex drive's sake, everyone from Lower Slobovia to Tycho Base would be talking CRT's like they were Laverne and Shirley. I write this just to assure you that there are some of us out here who appreciate the deeper pieces (no pun intended, and I'm not talking water). Even so, I do not have to agree totally with them.

I do think your magazine is headed in the right direction. (I still don't know about "all companies without bias" yet, but you do seem to be doing a good job of being impartial.) I do like the amount of advertising you've had so far, but I wouldn't want much more than what you have. But realistically, you have to survive, so I would let you do your will, without any opinions from us.

Mits Hadeishi
Gardenia, CA

I am currently working on a novel which is based on GDW'S *Traveller* and *Imperium*, with full okay and help from Marc Miller and Co. If you publish that bit of news, please add to it that I am very grateful to Marc for his help.

In addition, I have developed a role playing system combining the fun of AD&D with the realism of *Runequest* combat, and will send the instructions on meshing the two together to anyone for $2.50. Orders should be sent to the below address.

Tim Byrd
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NEWS & PLUGS

Boynton & Associates (the publishers of *Model Retailer* magazine) will come out with the "Game Master Catalog" in the fall. Billed as "the first comprehensive catalog ever done for the games industry," it will cover wargaming, miniatures, RPGs, etc. Copies will be available for purchase by consumers – not just stores.

The Colonies is a historical military/economic simulation of the conquest of the New World – play by mail. Write The Colonies, 4114 Maple St., Fairfax, VA 22030. Setup is $6.00; subsequent turns are $1.00 each.

Occasionally reliable sources indicate that Metagaming is planning a comprehensive index to the *Fantasy Trip* games, to be sold as a supplement.

The "National Monstergaming Society" (6 E. Main St., Richmond, VA 23219) is interested in promoting multi-player board wargaming (that is, the BIG games). Possible projects include publication of a newsletter, reviewing new and old big games, formation of regional teams, and staging of weekend games. All the games they mention are historical (i.e., *DNO, War in Europe, Korsun Pocket*, etc.

The "Society for Earthbound Vulcans" (SEV) is under new management; the head elder is now William Lowe (Solei). Subscriptions to the newsletter, *Mind-Meld*, comes with membership of $5/year. Contact the SEV c/o William Lowe @ 2206 Daniel St., Trail, BC, V1R 4G9, Canada.

Phoenix magazine, a British gaming magazine, is now being distributed in the US by Firefight Enterprises, 41-15 223rd St., Bayside NY 11361. Subscriptions are 7 issues for $14.00.

"Microcomputer Applications" is organizing as a forum for computer wargamers. Contact them at 107 Conneauttee Drive, Edinboro, PA 16412.

READER ADS

Reader ads are available to individuals (not to companies). $5 per insertion; limit 20 words or four lines.

Wanted (to complete our files here): TSG No. 1 in good condition. Will trade a year's subscription. /s/ Steve Jackson.

AUSTIN AREA WARGAMERS are invited to the TSG playtest sessions. Want to play, discuss and review new games from various mfrs? Call 447-7866 for information.

Calendar

July 25-26-27-28: 8TH ANNUAL FLYING BUFFALO CONVENTION. Wargame con; FBI headquarters, 1340 N. Scottsdale Rd., Tempe AZ. Contact Flying Buffalo, POB 1467, Scottsdale AZ 85252.

July 26-27: MASSCON 80. Wargame con, Campus Center, UMASS, Amherst, MA. Contact Dennis Wang, 11 Dickinson St., Amherst, MA 01002.

August 1-2-3: CWA-CON 80. Wargame con: College of DuPage, Glen Ellyn, IL. Contact Chicago Wargamers' Assn., 3605 Bobolink, Rollingmeadows, IL 60008; 312-394-5618.

August 2-3: BANGOR MAINE AREA WARGAMERS' ANNUAL CONVENTION. Contact Edward F. Stevens Jr., 13 South St., Rockland, ME 04841; 207-594-2642.

August 8-9-10: ODYSSEY '80. Wargame con; UNH Memorial Union Building, Durham, NH. Contact R. Bradford Chase, 44 Highridge Drive, Dover, NH 03820.

August 21-24: GENCON XIII. Wargame con; University of Wisconsin-Parkside, Kenosha, WI. Contact POB 756, Lake Geneva, WI 53147; 414-248-9099.

August 29 to Sept. 1: NOREASCON 2. The 38th World SF Convention, Boston. Contact POB 46, MIT Branch Post Office, Cambridge, MA 02139.

August 30-Sept. 1: PACIFICON. Wargame con, San Mateo, CA. Contact David G. Hinkley, POB 5833, San Jose, CA 95150; 408-374-9770 or 371-4229.

Feb. 14-16, 1981: DUNDRACON VI. FRP gaming con, Oakland, CA. Contact @ 386 Alcatraz Ave., Oakland, CA 94618.

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(He had the picture all set up, and the thing jumped right off the table. I think it's under the bookcase. Did you get a shot? Just the tail? Aw, come on. We can't run a picture of a dragon's tail. Here, dragon. Here, boy. Hey, Forrest! What does this thing eat? Maybe we can lure it out . . .)

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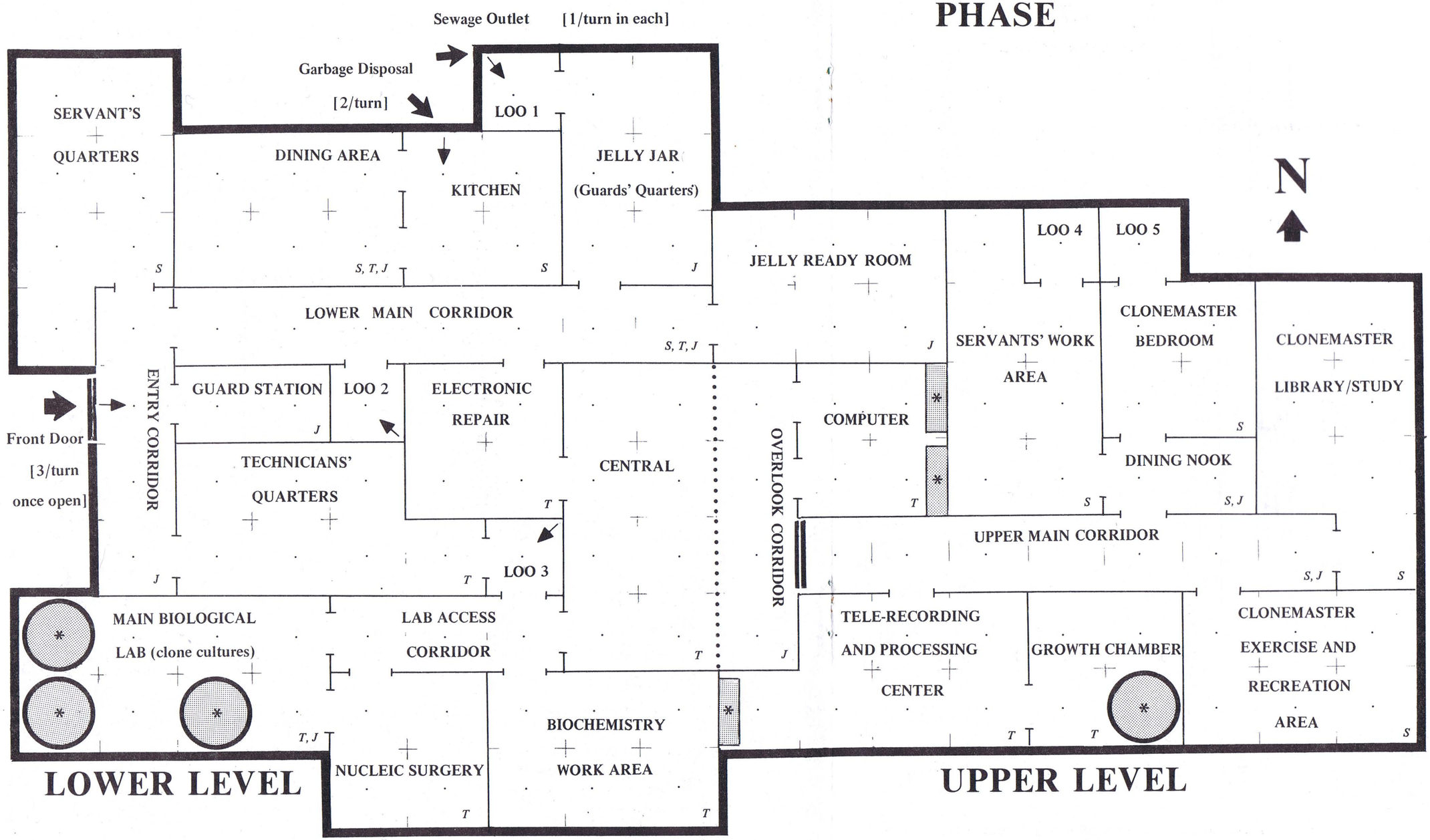

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